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U.S. DEPARTMENT OF COMMERCE

THE ECONOMIC POTENTIAL OF COLLETON, DORCHESTER, AND HAMPTON COUNTIES, SOUTH CAROLINA

VOL. II

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TECHNICAL ASSISTANCE PROJECT: TO IDENTIFY THE ECONOMIC POTENTIAL OF COLLETON, DORCHESTER, AND HAMPTON COUNTIES, SOUTH CAROLINA

WITH PARTICULAR REFERENCE TO LIGHT MANUFACTURING

VOL. II

Prepared For

ECONOMIC DEVELOPMENT ADMINISTRATION
U. S. DEPARTMENT OF COMMERCE

By

UNIVERSITY OF SOUTH CAROLINA

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PART TWO: REVIEW OF INDUSTRIES COMPATIBLE WITH RESOURCES

The State of South Carolina has a wide attraction for a variety of industries as witnessed by an increased diversification of industrialization in recent years. Our problem is to explore the specific types of industries most attracted to the Three County Area as differentiated from the remainder of the State. Without regard for the obvious advantages of this area these may well be examples of those industries most common to the State as a whole in a sort of "spinoff" operation. These are recounted elsewhere. Industries attracted to the rest of the State, of course, might also be attracted to the Three County Area.

The types of industries located in a specific area must either originate there because of unique natural resources found there or be attracted there by market demand, transportation advantage, or by labor force availability. Only the rare "back-yard industry" is found in a specific spot because the investor-entrepreneur happened to live there. It is possible that by building up the tourist attracting and retirement-area advantages of the Three County Area some individual may be attracted who will some day start a business just because he lives in the area, but the type of industry can hardly be forecast.

Originating industries dependent upon natural resources would seem to be limited by the limited physical resources of the area. These seem to be forest resources, farm crops and in some areas of Dorchester County cement limestone. It is possible that some mineral resources exist, unexplored, in the extensive swamp areas and off-shore. In the adjoining county a considerable phosphate deposit is newly discovered and exploitation is underway. Local clay and marl deposits suggest the same exploitation as the remainder of the state but unique qualities have yet to be demonstrated. In line with the extensive off-shore exploration underway throughout the world, largely by oil companies, it is recommended that South Carolina make a complete survey of the mineral characteristics of its swamp areas including those in the Three County Area.

The renewed interest in the minerals on the botton of the sea, including off-shore oil drilling, is comparatively new, because the water has seemed a natural barrier, and the swamp has acted likewise. Should there be mineral resources beneath the swamp and its sand-marl bottom it would be somewhat easier to mine than an off-shore location. Even the unlikely possibility of oil must not be overlooked although past explorations have been unpromising. The main interests, however, would be in other mineral resources such as the already mentioned soft-limestone marl underlying much of the area, pebble quantities of rare metals in the sand, and even the sand itself. This interest in the swamp areas, especially mineral characteristics beneath the top few layers of swamp, extends to all three counties, since all have extensive swamp areas although only Colleton has a sea-coast swamp. Borings made along the Savannah shore of Hampton, and much deeper explorations of inland Dorchester swamps might provide physical resources resulting in industry attraction.

Conservation Overriding

While exploiting the possibilities of sand-sifting,with land-fill for land-building,conservation considerations should be overriding. Swamp seems useless from an industrial viewpoint, but Fish, Wildlife, and Recreational interests have pointed out the undesirability of wholesale swamp drainage as in Florida, and tidelands destruction along the northern coast. Recreation centers and refuges for wildlife and birds already located within and not far from the Three County Area suggest the possibility of National and State Park developments for the area in the future. Overall benefits, rather than narrow temporary economic interests of a present owner or group of nearby residents must govern the final choice of land use. Large areas in private preserves and former plantations offer the possibility of assembling large acreage where privacy, protection from noxious fumes, and a low population density must be considered. There is evidence that the present lack of development in the Three County Area may be an attraction for certain types of industry requiring comparative isolation.

Farm products providing a location attraction for the Three County Area are largely those serving the fresh vegetable market. Most of the vegetable farmers in the area are not interested at present in any canning, freezing, or preserving industry. They prefer the greater, if erratic, profits of "beating the season" with fresh vegetables to the lower assured profits of contract growing. Livestock activities do not yet offer support for a meat-packing industry, although farm activities themselves benefit from a favorable climate and long mild-growing seasons. Agricultural economics, except as these reflect in agri-business developments are not a major topic of this study, but it is evident that better farm management is needed. An appeal to the farm advisory services is recommended, with aid needed in improved practices, cooperative marketing, and crops better suited to farm automation. Processed food industries, including meat-packing and food preservation by freezing, canning, etc. are largely dependent upon changes in farm activities. For the immediate future there seems little attraction in the Three County Area for this type of industry and the container-components thereof. Local agriculture may well continue to serve the fresh vegetable market and secondarily serve the export markets generated by the State Ports Authority at Charleston and Port Royal. Exceptions are noted later.

Market demand in a comparative-lightly populated area has little attraction. The Three County Area was explored as a service area for the four larger cities located at the corners of a rectangle of which it is the approximate center. Certain industries serving the Charleston, S. C. and Savannah, Ga. markets might find a market attraction here. With the local market not an important feature the types of industry which would be market attracted to the Three County Area are only those which can be attracted by a regional-national market.

It has already been suggested that some of the best industrial prospects may be found among those industries which are already the leading industries of the State. This is illustrated in the Three County Area by the arrival within the past few years of a firm making felts for the paper industry, and the first large textile company.

Statewide increase in importance has been greatest for the Electrical Machinery Industry, where employment has doubled while other industries lost ground. A brief survey of the leading industries in South Carolina, follows, with significance suggested.

LEADING INDUSTRIES OF SOUTH CAROLINA
JUNE 30, 1960 - JUNE 30, 1966

South Carolina's industry showed impressive gains during the period 1960-1966 as employment,payrolls and production increased substantially. Manufacturers have spent sizeable amounts in business investments in plants and equipment. New establishments have begun operation in every section of the State. The total capitalization of all of the State's manufacturing industries at the end of this period was $2,288,747,818 as compared to $1,561,208,311 in 1960, an increase of almost one-third. During the same period, the value of the annual product increased from $3,358,000,086 to $5,696,834,335 (40% increase) and total manufacturing employment averaged 259,259, an increase of 59,279 over the six year period. See Table 58.

Listed below are eight of the State's leading industries, showing capital invested, value of product and persons employed. Textiles, Clothing, and Paper and Pulp have been the three leading industries (according to value of product) during this period, while as a result of changing emphasis and new growth, Electrical Machinery and Patent Medicine, Chemical and Compound have grown more important (Electrical Machinery moving up to fourth place) while Furniture and Foundry and Machines have decreased in importance. Total value of product of each of these industries has increased significantly, however, and employment in these industries has increased by almost 50,000 as proof of the general industrial expansion which has taken place over the last six years in South Carolina.

Textiles with a capital investment of $622,263,000 in 1960 increased to a $994,824,000 investment in 1966 while value of product increased from $2,053,742,000 to $3,213,940,000 and employment was up from 122,877 to

Table 58 -- LEADING INDUSTRIES IN SOUTH CAROLINA
JUNE 30, 1960 - JUNE 30, 1966

INDUSTRY	JUNE 30, 1960		
	CAPITAL INVESTED (000)	VALUE OF PRODUCT (000)	PERSONS EMPLOYED
Textiles	622,263	2,053,742	122,877
Clothing	19,779	200,799	28,113
Paper and Pulp	115,866	199,342	5,389
Electricity	497,337	133,631	2,196
Foundry and Machine Shops	22,066	72,885	4,080
Furniture and Woodwork	25,852	58,644	4,769
Patent Medicine, Chemical & Compound	8,026	35,580	850
Electrical Machinery			
	1,311,189	2,754,623	168,274

INDUSTRY	JUNE 30, 1961		
	CAPITAL INVESTED (000)	VALUE OF PRODUCT (000)	PERSONS EMPLOYED
Textiles	700,484	2,029,538	122,028
Clothing	22,375	215,663	29,102
Paper and Pulp	140,375	207,519	6,607
Electricity	522,059	139,627	2,352
Foundry and Machine Shops	19,102	77,758	3,841
Furniture and Woodwork	27,225	60,848	4,923
Patent Medicine, Chemical & Compound	10,183	48,019	852
Electrical Machinery			
	1,441,803	2,778,972	169,705

Table 58 -- LEADING INDUSTRIES OF SOUTH CAROLINA (Cont.)
JUNE 30, 1960 - JUNE 30, 1966

JUNE 30, 1962

INDUSTRY	CAPITAL INVESTED (000)	VALUE OF PRODUCT (000)	PERSONS EMPLOYED
Textiles	709,154	2,350,876	124,862
Clothing	23,408	235,588	31,423
Paper and Pulp	146,869	210,560	6,323
Electricity	537,393	146,924	2,348
Foundry and Machine Shops	18,005	67,016	3,715
Furniture and Woodwork	27,654	98,858	5,254
Patent Medicine, Chemical & Compound	17,982	80,533	1,609
Electrical Machinery			
	1,480,465	3,190,355	175,534

JUNE 30, 1963

INDUSTRY	CAPITAL INVESTED (000)	VALUE OF PRODUCT (000)	PERSONS EMPLOYED
Textiles	730,929	2,381,375	127,526
Clothing	26,951	236,736	32,805
Paper and Pulp	158,849	237,730	6,707
Electricity	525,236	157,001	2,189
Foundry and Machine Shops	18,493	81,080	4,062
Furniture and Woodwork	31,099	95,509	5,382
Patent Medicine, Chemical & Compound	26,469	97,568	1,846
Electrical Machinery			
	1,518,026	3,286,999	180,517

Table 58 -- LEADING INDUSTRIES OF SOUTH CAROLINA (Cont.)

JUNE 30, 1960 - JUNE 30, 1966

INDUSTRY	JUNE 30, 1964		
	CAPITAL INVESTED (000)	VALUE OF PRODUCT (000)	PERSONS EMPLOYED
Textiles	790,146	2,612,599	128,631
Clothing	35,671	298,658	36,154
Paper and Pulp	180,043	264,065	7,060
Electricity	615,002	161,981	2,207
Foundry and Machine Shops	19,667	92,680	4,600
Furniture and Woodwork	30,307	78,971	5,746
Patent Medicine, Chemical & Compound	22,501	95,711	1,877
Electrical Machinery	44,617	104,799	6,881
	1,737,954	3,709,464	193,156

INDUSTRY	JUNE 30, 1965		
	CAPITAL INVESTED (000)	VALUE OF PRODUCT (000)	PERSONS EMPLOYED
Textiles	920,594	2,831,662	133,294
Clothing	36,301	316,780	37,663
Paper and Pulp	179,162	262,622	7,334
Electricity	487,585	164,236	1,965
Foundry and Machine Shops	21,567	115,544	5,085
Furniture and Woodwork	31,512	91,094	5,751
Patent Medicine, Chemical & Compound	25,294	97,718	1,991
Electrical Machinery	50,949	151,178	8,629
	1,752,964	4,030,834	201,712

Table 58 -- LEADING INDUSTRIES OF SOUTH CAROLINA (Cont.)

JUNE 30, 1960 - JUNE 30, 1966

INDUSTRY	JUNE 30, 1966		
	CAPITAL INVESTED (000)	VALUE OF PRODUCT (000)	PERSONS EMPLOYED
Textiles	994,824	3,213,940	138,225
Clothing	45,398	361,486	40,265
Paper and Pulp	194,001	298,290	7,462
Electricity	499,029	170,473	1,942
Foundry and Machine Shops	26,894	132,823	5,472
Furniture and Woodwork	33,145	103,270	6,407
Patent Medicine, Chemical & Compound	32,158	132,469	2,176
Electrical Machinery	66,671	217,706	12,710
	1,892,120	4,630,457	214,659

SOURCE: Annual Reports of the Department of Labor of the State of South Carolina, 1960-1966

138,225 during the same period.

Paper and Pulp had a capital investment expansion from $115,866,000 to $194,000,000 in six years as its value of product increased from $199,342,000 to $298,290,000 (an increase of one-third) and employment rose from 5,389 to almost 7,500 during this period. Clothing capital investment made the most significant gains of the leading industries. It more than doubled during the six year period. At the start in 1960 capital investment totaled $19,779,000. In 1961 capital investment increased to $22,375,000 and in 1962 to $23,408,000. In 1963 the total was $26,951,000, jumping to $35,671,000 in 1964. 1965 showed an increase to $36,301,000. A large spurt to $45,398,000 in 1966 ended the reported period.

Value of product had a most impressive increment of almost 50 per cent. Value gained from $200,799,000 in 1960 to $215,663,000 in 1961 and gained an additional $20,000,000 in 1962 to $235,588,000. In 1963 it stood at $236,736,000 but jumped by $62,000,000 in 1964, the greatest increase in value in any single year during the period. 1965 showed an increase to $316,780,000 and stood at $361,486,000 in 1966 at the end of the period.

Employment averaged over 2000 new employees a year for this industry for a six year total of 12,152 employee-increase. It started at 28,113 in 1960 and after an increase to 29,102 in 1961, jumped to 31,423 in 1962. 1963 saw employment at 32,805 and the biggest gain (3,349) over the period to 36,154 in 1964. After an increase to 37,663 in 1965, employment rose to a 40,265 figure at the period's end.

We have now looked at some of the leading and fastest growing industries in South Carolina. These might be good prospects to move from other states to South Carolina on the principle that "like attracts like." These industries have found a good home in South Carolina. Newcomers to South Carolina might find a good home in the Three County Area.

This concludes the leading industry approach to industrial development and we will now turn to another very popular approach for identifying "hot prospects" for our Three County Area "industry hunters." This is said to be the most systematic and professional way.

LOCATION FACTORS

The systematic approach to industrial development and the seeking of new industry is by use of location factors. The strong points of a potential location are listed, and compared to the characteristics of a wide variety of industries. In theory by matching up the strong points of an area with the requirements of a type of industry the best prospects should be identified and if effectively solicited recruited for relocation. Industrial location is ever so logically organized. We know only after the fact that industry can be said to be located in an area because it is market oriented or raw material oriented or labor intensive. Some industry just grew up almost by chance where it is. When locating a new branch it may be more logical. Each locality must have some outstanding characteristic. Thus a study of Charleston could not help stressing its seaport and the commerce generated thereby. In the Three County Area the outstanding features are not so evident, nor are they uniform for the whole of the area. Part of the difficulty is that we are not trying to relocate a whole industry, but only to persuade one industry member to build a new plant in a specific location. Sometimes a plant relocation is made to get away from a concentration of an industry which may have raised labor demand and thus wages, so the location depends on factors other than industry characteristics. There is wide spread belief that the recent industrialization of Florida came about as a result of northern industrialists building Florida branch plants so that they might visit them in the winter and cut down on personal vacation expense, but this is not a normal location factor.

A standard treatment of location factors breaks them down into six general catagories: Type of Production, Type of Output, External Linkages, Labor Requirements, Transportation Considerations, and Market Size. Under each catagory certain factors are considered. Under Type of Production the balance is first struck between Labor Intensive and Capital Intensive often on the basis of value added per employee. The theory is that an industry which requires a greater than average capital investment seeks different locations than one dependent on labor. The Three County Area would seem to favor a Labor Intensive industry such as Meat or Apparel rather than a Capital Intensive one. Some industries are limited by Economies of Scale so that there is a strong bias towards large plants such as Steel Mills, whereas the Three County Area would be more attractive to industries characterized by many small plants such as Lumber and Wood products.

Where Type of Output is subdivided into location factors a balance is struck between whether output is on a Standard mass product or whether Special Products characteristic of the job-shop are produced. Again, the

Three County Area has characteristics which favor the small plant and Special Products. Some products are Intermediate Products and one plant's final output becomes raw material input for another plant. Other products are Final Products and go directly to the consumer. Depending on the market the Three County Area might serve industries with either factor characteristic.

External Linkages may be either Forward, where the industry tends to locate near the consumers of its product or Backward Linkage where an industry tends to locate near the firms which act as its material suppliers. Since the Three County Area has neither many customers nor many intermediate product firms linkage may not have great significance overall. On the other hand, in specific locations such as near the established plants the Backward Linkage may be important. Thus, Dorchester County might seek to locate cement users, such as the producers of prestressed beams, trusses, and railroad ties near the established cement producers, or Hampton County might try to invite furniture and cabinet producers who could use the laminated Micarta output of Westinghouse near that plant, or Colleton County might seek those who could convert the output of the J. P. Stevens fiber glass fabric mill into consumer products. Some industries seem to show Concentration Dependence because when a plant is located near other firms of its own industry certain cost savings are experienced through sharing the costs of necessary facilities or services. The Three County Area would seem to find poor prospecting among those industries showing this factor, such as Men's and Boy's Suits and Coats in the apparel industry or book printing. In some industries the concentration of plants is 70% or more in large urban areas, which is termed Urban Orientation. Except for the lower end of Dorchester County which is within the influence of the Charleston SMA the Three County Area would seem to offer no attraction to industries which are Urban Oriented, but many industries which were largely urban are moving to rural areas such as most of the Apparel Trades. Many such moves are motivated by a search for cheap labor. Other industries with such an orientation are mentioned under the location factor.

Labor Requirements constitute a breakdown according to skill requirements ranging from Professional through Skilled or Specialized to Semi-Skilled. Also significant are those industries which seek Secondary Workers among the wives of predominantly male-employing areas or Cheap Labor at the low skilled level. Because the South Carolina State Technical Education Committee will train workers of any skill at no expense to the employer the skill level of an industry may not be a limiting factor. Indeed an approach to an industry largely urban and requiring special trained workers such as Fabricated Millwork, Upholstered Household Furniture, Industrial Chemicals, Cleaning preparations, cosmetics, perfumes, Tires and innertubes, Leather Tanning and products, Engines and Turbines, Silverware and platedware, may gain a favorable reception just because of this training availability advantage. The Three County Area is fortunate to have the fine services of the TEC Special Schools available to it in the search for a balanced economy through the recruitment of new industry. Many locations within the Three County Area have secondary workers available and these should seek the Food and Apparel industries. On a national basis much of South Carolina offers cheap labor in the sense that wages have been keyed to the low-wage textile and cement industry, or to agriculture which has just established minimum wage coverage. This is equally true of the Three County Area, and at the level of industrialization they report their industries seeking cheap labor should still be attracted. Among these which are also Labor Intensive and Urban Oriented are:

1. Housefurnishings, bags and canvas products
2. Other fabricated textile products
3. Paperboard products, containers and boxes
4. Cellulosic fibers
5. Gum and wood chemicals
6. Fabricated rubber products
7. Luggage, leather goods
8. Cutlery, hand tools and general hardware
9. Non-metalic mineral products
10. Electronic components
11. Miscellaneous transportation equipment
12. Toys, sporting goods

Under the Transportation rubric several requirements are grouped. The first is cost of transportation as Low for dollar value of product vs High for value of product, usually referred to as a location factor which generates "footloose industry," and is almost inapplicable where only the local market is served. Since the Three County Area is comparatively isolated and has a small local market it must seek high-value products for which the transportation costs are low, or must locate industries serving larger markets near low-cost water-transportation. For lower coast areas and the Stokes Bluff site in Hampton this means Chemical or Agribusiness industry. For inland areas concentration might be on processed food and Meat, Apparel, Fabricated wood products, Plastics and synthetics, Fabricated Rubber Products, Leather Products, and specialized metal products or machinery of a miscellaneous nature. Several of these last can bear the transportation costs of air shipment to large urban locations and might be strong prospects for the airpark industrial area under development at Walterboro Airport. When considering the metalworking and fabricated metals industry, TEC Special Schools must be again considered a major advantage anyplace in South Carolina, because these are large employers of skilled workers, and automation is making relocation for lower production costs a matter for company policy. In the Three County Area special attention might well be given to the following industries on this basis: Fabricated Metal Products, Farm Machinery, Miscellaneous Machinery, Electrical Machinery, Welding Apparatus, Radio, television transmitting, signaling and detection equipment, Sport Boat building, Mechanical measuring and controlling instruments, Truck and bus bodies and trailers, Motorcycles, bicycles and parts and Miscellaneous transportation equipment.

Raw Material Orientation

The second transportation catagory is Raw Material Orientation and differentiates those industries which must be located near a specific natural resource from those whose raw material may be shipped in. Often basing-point pricing history in an industry or freight-rate differentials between raw and processed material make location for such industry almost independent of geographical logic. The Three County Area has almost no developed natural resources except forests generally, especially river-bottom hardwoods, and in Dorchester County limestone for Cement and Lime production. Since this last industry is dependent on the soft limestone known as Cooper Marl which underlays much of the coast area,should overcapacity in the Cement industry be overcome and new Cement plants be in prospect, these might be located almost anyplace in the Three County Area. An advantageous location might be in Hampton County where barge transportation on the Savannah might provide the low-cost transportation necessary to reach a larger market than exists even in the whole Four Corners Area. There may well be unexploited mineral resources under the Coastal Swamp or off-shore which would make a raw-materials industry possible there too. Finally, transportation may be port oriented. The Three County Area has no ports to compete with Charleston or even Port Royal but several intercoastal waterway locations may give port advantages especially as the completion of the trans-Florida barge canal gives better access to the Gulf resources such as secondary petro-chemical basics. Port orientation may be either for imports or exports, and the export of such products as soybean derivatives or Wood Products which cannot bear high transportation costs may offer opportunity. Imported raw materials also suggest Agricultural Chemicals.

Market Size works against the Three County Area since even on a Four Corners Area basis the market is largely local except for very high-value products which might be delivered by air. In the case of lower Dorchester County near Charleston the local market may be large enough to support desirable small plants. Regional markets are developing and for the future these may change industrial location factors. At present only industries serving National markets would find the Three County Area attractive. A case can be made, however, for the location here of the eastern manufacturing branch of a west coast based company. If the National market continues to grow as it is expected to, and Regional markets attract west coast manufacturers to the Atlantic seaboard,this central coast area midway between Florida and the New York market becomes increasingly attractive. Equally good is the case that can be made for locating the southern branch of a northern company, especially an upper mid-west northern company, in South Carolina. South Carolina is closer in truck time and miles to the New York City market than is any location slightly north and west of Detroit, Michigan. The Three County

Area might have to locate its breakpoint slightly more westward, perhaps at South Bend, Indiana, but would have an advantage over Chicago, Illinois.

Taking the Three County Area as a whole, and realizing that specific locations differ, we may summarize this opinion in this way. The industry which would find the Three County Area most attractive would be labor intensive, would have no strong bias towards large plants, but would favor the individualized or specialized product of the non-mass market produced for a final consumer. The industry would not have strong linkages, except perhaps to local plants or a South Carolina leading industry, such as Textiles, Paper, or Electrical Machinery. Labor requirements would normally not be above semi-skilled and the industry would be attracted by cheap and secondary workers. The product should be able to bear high transportation costs to a regional or national market. It might be oriented to a small seaport or barging.

SEARCH FOR FAVORED INDUSTRIES

There are about 180 different SIC designations in the four-digit series which must be considered, and many many more when the SIC is extended to six-digits, but modern corporations seldom restrict their operations to an SIC code, although such coding is necessary for statistical purposes. The rise of the conglomerate merger has made it next to impossible to code accurately any industrial unit larger than a single plant, if that, in modern diversification-seeking industry where bakery companies end up running tourist attractions and textile and tobacco companies do almost anything other than their titular field. Detailed information about these many industries is hidden in the writings of industrial economists, financial analysts, industrial location experts, industrial development centers, trade associations, and company annual reports. All of these and many more were consulted in reviewing more than 180 different industries in an effort to make a marriage between some industry member and the Three County Area. A few industries have been designated through this review of location factors.

Other technical and economic approaches have been made to the industry location problem. One of these is by way of forecasts of national employment in the search for "growth industries." Some of the most significant work in this area has been by Dr. A. J. Jaffe, Director, Manpower and Population Program, Bureau of Applied Social Research, Columbia University, but this report of the impact of technical change on employment could only be consulted in manuscript form and in restricted hearings before Congressional Committees.

By combining productivity in relation to wages and market demand estimates Dr. Jaffe casts a vote in favor of Stone, glass and clay products, Paper and allied products, Electrical machinery, equipment and supplies, Apparel and other fabricated textile products, Furniture and fixtures, Photographic equipment manufacturing, Rubber and plastic products, Chemicals, Aircraft and parts, as manufacturing areas with the best growth possibilities.

In the Three County Area, from among the industries identified by way of location factors, the strongest growth industries would seem to favor inchoative action about these selected industries: Electrical machinery, equipment and supplies (especially electronic components); Apparel and other fabricated products; Furniture and fixtures, especially cabinets, and fabricated millwork; Rubber and plastic products; and Chemicals. Industrial relocation is not restricted to growth industry although they admittedly furnish the most desirable new plants. Some stagnating industry is on the move to get away from urban ghettos, outmoded plants and labor difficulties.

NATIONAL FORECASTS OF EMPLOYMENT

Expectations for specific industry employment nationally are significant for the Three County Area for many reasons. The first of these is obvious. As the employment pattern in South Carolina becomes more like the national pattern, a trend which has been intensifying since World War II, the State can expect expansion in the same segments as does the national economy. In addition it is that segment of the economy which is expanding, of course, which is most apt to expand into the area concerned. This comes about in two ways. Growth industries are those most apt to establish branch plants or offices and for a long time to come this will be branch plant territory. Secondly, it is the business establishment which has begun feeling tight at the seams which seeks a new plant location, rather than going through the expensive and disruptive expansion where now located. In certain manufacturing type industries the advent of automation or new processes against the resistance of established ways makes starting from scratch desirable.

Concentrating on Favored Industries

Looked at from the other side, it is more difficult to persuade a member of a static or contracting industry to move and even if a plant is obtained its future may not be promising. It is the unprofitable employment source which builds a reputation as a "run-away plant." Since any industrial development group has relatively limited funds, it is wiser to concentrate on the better employers. The three county boards are even more limited than others in South Carolina, as to funds, and should therefore be most concerned with national trends, although local resources and advantages also govern.

The U. S. Department of Labor in its Bulletin No. 1536, "Projections 1970, Interindustry Relationships, Potential Demand, Employment," assumes full employment in a non-war economy and calculates several models of employment to 1970. The model which is summarized here assumes high service employment rather than a high durable goods alternative, and has total employment increasing on the average about 1.9 per cent a year which is substationally higher than has been experienced during most of the post World War II period, but is essential if full employment is attained.

The largest growth is projected for State and local government attributable to the continued expansion in schools, medical care, and other public services as stimulated by federal grants. The next most rapid growth area is employment in personal services,business services, private educational, and medical services. A third "private" area, finance, insurance, and real estate, is also expected to increase faster than average, and these three areas together are expected to provide a third of the 1970 jobs nationally.

Communications and public utilities employment will hold about constant. Railroad employment will continue to decline but trucking and air transportation will increase but not as much as the population. Agricultural and Mining employment will continue to drop from about 7% in 1965 to only about 6% by 1970 and may then be exceeded by contract construction. All of the foregoing are partly dependent on industrial growth.

Manufacturing employment is naturally the area most attended to by industrial development. In general Nondurable industries will gain only slightly, balancing declines in food processing, tobacco, textiles, and petroleum with increases in apparel, paper and paper products, paperboard and boxes, printing and publishing, chemicals, plastics and synthetics, drugs and toilet preparations, and rubber and miscellaneous products.

Any one of these slight-gain industries is good. Some of these losses are the result of increases in productivity which exceed increase in demand so Food processing, plastics and petroleum products may offer new plant opportunities even though total employment is dropping in these industries.

Durable goods employment also shows some offsetting. Slight reductions are expected in ordinance, lumber, steel, communications equipment (defense part), motor vehicles, and aircraft (defense part). Increases of various sizes are expected in machinery (especially computer related), fabricated metal products, furniture and fixtures, stone, clay and glass products, nonferrous metals, and communications (nondefense part), electrical transmission and distribution equipment, household appliances, electronic components, civilian aircraft, transportation equipment, instruments, and optical and photographic equipment. Overall durable goods employment would increase at a rate of 0.4 percent a year with nondurable slightly better. Overall manufacturing employment is projected to increase about 0.5 percent a year until 1970, which is a rate below that of the economy as a whole since manufacturing employment is slated to represent 3% less jobs by 1970 than in 1957.

Within this national picture are many opportunities for growth even in the manufacturing area. As has been mentioned, much of the job increase to 1970 will be in service industries in which the Three County Area is now greatly deficient. In manufacturing the best chances of gaining a plant would appear to be in food processing, plastics and synthetics, furniture, paper, printing and publishing, chemicals, computers and metal fabricating. Should defense needs increase greatly, the related parts of aircraft, communication equipment and electronic components industry offer good hunting.

CONCLUSIONS ABOUT INDUSTRIES

We have now reviewed briefly three ways of identifying industries, the members of which might provide new plants to an area inviting industry. In the process several industries more apt to be compatible with conditions and resources found in the Three County Area than others have been identified. We will now review briefly some of the most promising industries.

Inasmuch as few of these are a "natural fit" derived from unique natural resources, trained-but-idle industrial workers such as might be generated by an extensive plant closing, or deficiencies in the service to a large regional or local market, there is no priority order among them. Since there is some difference in the resources of sites in different parts of the Three County Area, some sites, with or without extensive site-preparation, may be more fitted than others to a particular industry. It is not to be inferred that because a given industry is not mentioned there is no site for it. Neither is our neglect to mention a site indicative of any disapproval or defect in that site.

FOREST AND WOOD PRODUCTS

All of the Three County Area has extensive forest resources, although much acreage remains to be seeded in former agricultural sections, and some of the pulp wood plantings have not yet grown to harvest size. The highest price value is found in the river bottom hardwoods, and in tall trees suitable for poles and piling. Most of this is not a renewable resource, but will currently support further industrialization. Pine plantings for paper-pulp probably constitute the largest aggregate value, and these are growing more rapidly than they are being harvested.

There are already many logging and tree harvesting operations in the Three County Area and several Fabricated Wood Products plants producing such items as doors, wood-veneer baskets, floor blocks, etc. but only a few furniture operations. The Micarta plant in Hampton produces a basic resin surfaced plywood which would be very useful in cabinet and furniture production. This is, therefore, an industry area amenable to expansion. Generally the industry is Labor Intensive, and benefits only in the metals component by Economies of Scale in producing a styled and varied Standard Product for the ultimate household consumer in a Regional Market. The woodworkers required could be trained by TEC Special Schools, and there is some reserve of experienced carpenters and cabinetmakers. Cheap labor is an advantage, but the product is restricted to a regional market because only fabricated millwork in this category can bear much shipping cost. Water transportation if it can be arranged to lower costs may make some "export" possible, at least along the intercoastal waterway if not to many foreign markets.

Throughout the South the furniture industry has been expanding steadily in the last two decades. More than adequate supplies of lumber and labor have been factors in this expansion. There has been some geographical scattering of new plants but the heaviest concentrations are still found in the North Carolina area. This is a highly competitive industry not dominated by a large producer but opening to new entrants with aggressive marketing approaches. There is some sub-contracting, and most fine cabinetmaking is captive by household equipment manufacturers as are TV cabinets.

The prospects for furniture manufacture expansion in South Carolina and the Three County Area are good. Furniture is a relatively small operation in the area. Total furniture employment in South Carolina according to the 1963 Census of Manufactures was only 3342 persons. This was about 1.3 per cent of the State's non-farm work force. North Carolina reported 10% at the same time. South Carolina is a major producer of wood such as is used in the furniture industry. The Three County Area ships out veneer and plywood for furniture manufacture elsewhere.

Despite recent popularity of metal and plastic furniture the long-run prospects of the wood furniture industry nationally are good. Increasing demands for wood furniture will come from the expansion in the rate of new family formation. New families will be formed at the rate of about 1,100,000 a year between 1965 and 1970. This is twice the rate in the early fifties, and will continue at a high level into the mid-1970's. The Three County Area would appear to be a sound location for furniture manufacture especially if combined with fabricated millwork and cabinets. Wood, workers, and transportation to regional markets are all found. A furniture plant in the Three County Area might specialize or might include several different kinds of furniture. Bedroom and dining room and kitchen, upholstered, solid wood, porch and outdoor, or occasional pieces could all be made. Proximity to a textile mill producing glass fabric and other textile sources in the State could prove helpful in the manufacture of upholstered furniture.

One area of specialization to be stressed is the manufacture of wood-block flooring. There is already a producer in the area who could be aided in expansion, or new producers might be brought into production as the depression in housing starts is overcome. The wood-block, pre-painted and finished (perhaps with Micarta resin or as a part of the Novawood pilot plant) can be sold competitively in the flooring market at prices more attractive than those obtained for hardwood flooring. The more attractive patterns possible compete well with the plastic, vinyl rubber, etc. floor tiles used in the kitchen areas. There is also a market for this more attractive flooring in public buildings such as school gym floors.

APPAREL INDUSTRIES

The apparel industries and needle trades came south in search of cheap labor largely after World War II as improved transportation made escape from urban centers possible. Many representatives in this industry are considered fly-by-night employers and undesirable, but this is a short-run low profit industry. South Carolina has representatives of the best in the industry, and several of these are located in the Three County Area. Colleton County has plants in Smoaks and Walterboro. Dorchester County has plants in St. George and Summerville. Hampton County has plants in Estill and Hampton. There are still many locations throughout the Three County Area where apparel plants might be moved to take advantage of available low cost Secondary Labor. Although these may be temporary and transfer within a few years, they do get industry started, provide some local employment and set the stage for the arrival of other industries, some connected with the best of the apparel group owners.

A special case could be made for setting up in the Colleton County Industrial Area, a fabricated textile products company to use the fiber glass fabric available from the J. P. Stevens company. They are manufacturing some of the fabric in plants of their own into curtains, drapes, and coverings, but a national sewing-trades market exists for such output. Sewn products are regularly transported to urban centers by truck.

THE SAVANNAH RIVER PLANT AND HAMPTON COUNTY

It may seem strange to consider a government facility outside of the Three County Area when discussing employment producing industry potential within one of the counties, but there is a close relationship. Attention has been called to the spurt-and-fall in employment which started in Hampton County in the early 1950's and reversed back down almost to the original level. That may have reflected the employment effect of building the Savannah River Plant partially in neighboring Allendale County, since many Hampton County residents became construction workers at that time. After the plant was built more people became commuting employees of the facility itself. That is not so strange since the main population center in Hampton County is miles closer to the working interior of the installation than it is to the Atlantic ocean, and about the same distance as from Walterboro in Colleton County, and much closer than to either of the two population centers in Dorchester County. The northwest edge of Hampton County, location of Brunson and Fairfax, is closer to the Savannah River plant boundary than it is to Interstate 95 and Hampton County's southeast edge at Yemassee. The plant's future is, therefore, of great interest in the Three County Area, as a furnisher of employment as well as a magnetic force which may attract atomic based industry.

The Atomic Energy Act, Section One, states that it shall be the policy of the United States to develop, use, and control atomic energy "so as to ... strengthen free competition in private enterprise." Radio-active materials produced in Government-owned and privately-owned nuclear facilities throughout the United States are having and will continue to have great impact for man in medicine, agriculture and industry, and in space programs.

The DuPont operating contract, essentially a no-fee type, provides that the Commission reimburse the Company for all costs involved. These funds are appropriated by the United States Congress, and channeled through the United States Treasury, to the Atomic Energy Commission. All property, equipment and materials at the Savannah River Plant are owned by the United States Government.

The building of the plant was one of the largest jobs ever undertaken in the United States. More than a billion dollars have been invested between 1951 and 1966. The influx of people, machines and money boomed the economy of neighboring counties and provided a solid base for an industrial expansion. The great increase in industrialization in South Carolina that began in 1950 may be traced partly to this start-up.

About 40 per cent of the total plant operating force are native to the area and commute daily over a 60-mile radius of the plant. There has been an influx of scientific and technological workers to South Carolina totalling approximately 60 per cent of the total work force. This has tended to build up the pool of scientific talent in the area just as the original construction created a pool of experienced construction workers in this area. The possibility of tapping this pool of experienced workers and channeling it into a private industry considerably brightens the economic potentialities for the surrounding area.

This is of significance to the economic picture of the area because after some thirteen years of operation the size of the national stockpile of weapons is of such a size that production rates are currently being reduced at this as well as other sites operated for the Atomic Energy Commission. The AEC, in a special report, "Survey of Diversification Potential at Savannah

River," has indicated that the physical facilities and trained manpower no longer needed for defense are national assets that should not be abandoned or dispersed but put to work to advance our prosperity, health, and welfare.

Satellite Industries through Irradiation

Toward such diversification there has been a drive to attract satellite industries which can in some way use the facilities and products of the plant. Because of the increasing interest in heavy water for natural uranium reactors, an Atomic Industrial Forum Ad Hoc Committee was appointed in 1965 to review the feasibility and interest of industry in taking over the operation of the Savannah River heavy water facilities on a commercial basis.

There would appear to be definite incentive for location of a textile research center at or near Savannah River Project to do process development on the commercial production of textile mill products by graft polymerization. The Savannah River Project could supply radiation sources and facilities such as the cooling basins in 105-R could be used to conduct experiments.

Chemical concerns manufacturing acrylates, vinyl acetates, nylon, and ethylene glycol might be interested in exploring these products. Simultaneously textile manufacturers could be approached to arouse interest in the application of this process and use of Savannah River Project facilities in connection with the process. Machinery manufacturers might also be approached.

Wood-plastic-alloys are becoming increasingly promising and there is speculation that a Novawood pilot plant will be built in the near future. If a pilot plant is constructed, many economic and technical advantages could be realized by locating the Novawood plant in Hampton County. Wood supplies are ample and the products of the Westinghouse Micarta Division supply raw material. Chemicals could be obtained from the same sources as serve Micarta. Irradiation supplies, such as Cobalt 60, have a short haul from the Savannah River plant, which would also do contract irradiation. A large number of potential Novawood users, the furniture manufacturers and several large wood products companies, are located nearby in South Carolina or in adjacent North Carolina. The advantages of inexpensive water freight could also be realized through the use of barges on the Savannah River for shipment all along the Atlantic Coast. A satisfactory river port site lies just above the Hampton County border in Allendale County. At the Micarta plant in Hampton results similar to those obtained by irradiation in bonding wood and plastic are obtained by heat and pressure working with phenol and melamine-formaldehyde synthetic resins and at times with silicones, epoxies and polyesters. Westinghouse may wish to experiment with irradiation effects or the Westinghouse atomics Division may locate one of its operations near the existing plant of a sister division to share common corporate services.

The AEC has otherwise indicated a very real interest in attracting to the area private industry which might use its facilities. It would seem to behoove the Hampton County Development Board to cooperate in assembling site data near Fairfax where the railroads branch into the AEC restricted area. This could be used to solicit visits from the leading areo-space companies, or energy companies. All these have atomic interests and might need a site. Wood and paper companies are also prospects, as are the textile companies for the laboratory indicated.

The State of South Carolina also is interested in keeping this important scientific center operating and through the University of South Carolina is building up a research potential at Columbia.

FARM ORIENTED AGRIBUSINESS INDUSTRIES

There is no question but that in these semi-rural counties, where until very recently agriculture was the only way of life for important segments of the population,the shift to an industrial economy will not come easily, and that for a good many workers the farm will still be the major economic unit for a good many years to come. As was mentioned in the section on Agricultural Economics, the only part of the farm problem we can deal with is the identification of some industrial bridges from agriculture in the Three County Area. About half of the businesses reported in the Industrial Directories given in the Four Corners Study have some farm connection, being feed mills, farm basket plants, meat packers, fertilizer plants, food-packers, or peat packers. Those industries which we are referring to as agribusiness include more or expanded plants like these as well as the original meaning of a product like corn starch used as size in paper making, flour as paste in paper-bag making, or fermentables in making industrial alcohol. The somewhat incompatible nature of the Three County Area farm product production with an immediate large canning or freezing industry has been mentioned, and except for the possibility of locating a pilot food-freezing and packaging operation in the Yemassee area on a small scale to pack some of the same crops as are sold in the fresh vegetable market or luxury packing, there is not a great deal of industry-locating force in the Three County Area until the vegetable growing farm-pattern has been changed. There is good vegetable land lying fallow in the Three County Area now for lack of enough interest in "stoop labor" to provide the needed work force. In an area with as high an adult unemployment ratio as any in the country, such labor is performed largely by agricultural migrants. Other former vegetable land has been turned to soybeans, for mechanical handling.

The picture is somewhat more favorable for the Meat industry as shown in Table 59. Although not now enough, the area produces livestock (Beef cattle, hogs) and poultry, but does not have large commercial-broiler operations. Too many calves are sold as feeders and sent north for finishing. Too many of the hogs stop only briefly after having been farrowed in Georgia, before being sent on for packing as the famed Virginia Ham. A special study highlights this chaotic situation ("Hog Marketing," A. E. 264, L. D. Malphrus, Clemson, Department of Agricultural Economics, July 1964). Actually there is an equally complex shipping pattern for beef. South Carolina buys back as packed meat, livestock previously sold unprofitably. All of the southern states, including South Carolina, consume more meat than they produce. Setting up a Meat Packing industry for packing local meat would start with cooperative or commercial feedlots where animals are finished. Since the Southern Railroad has the lowest cost, such a feedlot should be on the Southern line. It should be near good roads for gathering livestock. There is some economy in locating an abattoir near the finishing, and this would also be a good location for a meat packing plant for distribution to both Columbia and Charleston. It is not too far from the Savannah River Project for experiments with irradiation preservation. Maturing of this promising development is too far in the future to be considered as current, but an industry locating should not disregard irradiation possibilities. The site is near Interstate 95 which will give ready access to the booming and fast-developing

Pee Dee area and to Savannah and overnight distribution over much of the Atlantic Coast. The type of operation visualized includes slaughter, processing (profitably to the packaged-meat stage to capitalize on modern meat merchandising in supermarkets), and refrigerated warehousing or freezer services. The liquid nitrogen food freezing system, which is sold by Air Products, Inc., could be used on processed meats including hamburger patties and individual servings for use. Sufficient livestock to support such an operation would be available from surrounding farms within trucking distance if the feed lot were not functioning,according to reports of the State Agricultural Department, and buyers. Poultry production is not recommended commercially.

The Meat industry is Labor Intensive and does not require a great capital outlay. It produces a final product with Backward Linkage to the available farm suppliers. Most of the industry has been Urban Oriented for a Regional market but modern transportation would make it possible to serve a large market area. The skilled butchers required could be trained by the TEC Special Schools as Butcher helpers have been by the STEP program. The product, especially pre-packaged meat put into containers by semi-skilled workers, after the meat cutter has done his work, can bear refrigerated transportation costs over a reasonable market distance, since costs are low in relation to the value of the product. There are other Meat Packing industry locations in the Three County Area, but the town of Dorchester seems to have the needed characteristics, highland space, clean water, good drainage plus isolation.

Specialized Packing

Specialized or luxury food packing particularly when combined with the growing of the product, is already represented in the Three County Area by an artichoke packer,and small scale food specialities offer a distinct opportunity

Table 59 -- LIVESTOCK AND POULTRY STATISTICS, 1961-1967

SOURCE: South Carolina -- Livestock and Poultry Statistics, State & County Estimates, Inventory Numbers 1961-1967, June 1967

County & State	1961	1962	1963	1964	1965	1966	1967
All Cattle and Calves: Number on Farms							
Colleton County	17,600	17,300	16,000	16,300	16,700	17,000	17,700
South Carolina	542,000	553,000	570,000	581,000	593,000	599,000	605,000
All Beef Cattle and Calves: Number on Farms (Including Dairy Bulls and Dairy Bull Calves)							
Colleton County	15,000	14,800	13,500	14,100	14,600	15,000	15,800
South Carolina	362,000	381,000	409,000	432,000	457,000	474,000	486,000
Beef Cows and Heifers Two Years Old and Over: Number on Farms							
Colleton County	7,250	6,900	7,400	7,800	8,000	8,300	8,400
South Carolina	179,000	193,000	207,000	219,000	226,000	235,000	237,000
Milk Cows and Heifers Two Years Old and Over: Number on Farms (Including Two-Year-Old Milk Heifers Not Yet Fresh)							
Colleton County	1,800	1,600	1,600	1,500	1,400	1,400	1,300
South Carolina	116,000	111,000	105,000	99,000	93,000	86,000	83,000
Hogs (Including Pigs): Number on Farms							
Colleton County	12,000	20,500	21,000	22,000	18,900	19,500	22,900
South Carolina	457,000	420,000	420,000	424,000	365,000	376,000	432,000
Chickens (Thousands): Number on Farms (Excluding Commercial Broilers)							
Colleton County	64	85	80	77	76	80	100
South Carolina	5,253	5,584	5,644	5,926	5,864	6,146	7,287

Table 59 -- PRODUCTION OF LIVESTOCK AND POULTRY PRODUCTS (Cont.)

1960 - 1966

County & State	1960	1961	1962	1963	1964	1965	1966
Eggs: Average Number of Layers (Thousands) during Year							
Colleton County	48	57	63	61	58	59	67
South Carolina	3,898	4,185	4,328	4,499	4,484	4,525	4,977
Milk: Annual Average Cows Milked (Number)							
Colleton County	1,600	1,600	1,450	1,450	1,300	1,300	1,200
South Carolina	108,000	104,000	99,000	94,000	87,000	82,000	77,000

SOURCE: South Carolina -- Livestock and Poultry Statistics, State and County Estimates, Inventory Numbers 1961-1967, June 1967

Table 59 -- LIVESTOCK AND POULTRY STATISTICS , 1961-1967 (Cont.)

SOURCE: South Carolina -- Livestock and Poultry Statistics, State and County Estimates, Inventory Numbers 1961-1967, June 1967

County & State	1961	1962	1963	1964	1965	1966	1967
All Cattle and Calves: Number on Farms							
Dorchester County	7,900	7,700	8,200	8,400	8,600	8,800	9,500
South Carolina	542,000	553,000	570,000	581,000	593,000	599,000	605,000
All Beef Cattle and Calves: Number on Farms (Including Dairy Bulls and Dairy Bull Calves)							
Dorchester County	4,400	4,900	5,300	5,400	5,900	6,100	6,700
South Carolina	362,000	381,000	409,000	432,000	457,000	474,000	486,000
Beef Cows and Heifers Two Years Old and Over: Number on Farms							
Dorchester County	2,550	2,500	2,700	2,900	3,000	3,100	3,200
South Carolina	179,000	193,000	207,000	219,000	226,000	235,000	237,000
Milk Cows and Heifers Two Years Old and Over: Number on Farms (Including Two-Year-Old Milk Heifers Not Yet Fresh)							
Dorchester County	2,000	1,800	1,900	2,000	1,900	1,900	1,950
South Carolina	116,000	111,000	105,000	99,000	93,000	86,000	83,000
Hogs (Including Pigs): Number on Farms							
Dorchester County	13,500	14,600	12,200	20,200	17,400	18,000	21,500
South Carolina	457,000	420,000	420,000	424,000	365,000	376,000	432,000
Chickens (Thousands): Number on Farms (Excluding Commercial Broilers)							
Dorchester County	87	104	100	90	89	93	110
South Carolina	5,253	5,584	5,644	5,926	5,864	6,146	7,287

Table 59 -- PRODUCTION OF LIVESTOCK AND POULTRY PRODUCTS (Cont.)

1960 - 1966

County & State	1960	1961	1962	1963	1964	1965	1966
Eggs: Average Number of Layers (Thousands) during Year							
Dorchester County	61	74	79	74	68	69	76
South Carolina	3,898	4,185	4,328	4,499	4,484	4,525	4,977
Milk: Annual Average Cows Milked (Number)							
Dorchester County	1,950	1,700	1,700	1,800	1,800	1,750	1,750
South Carolina	108,000	104,000	99,000	94,000	87,000	82,000	77,000

SOURCE: South Carolina -- Livestock and Poultry Statistics, State and County Estimates, Inventory Numbers 1961-1967, June 1967

Table 59 -- LIVESTOCK AND POULTRY STATISTICS, 1961-1967

SOURCE: South Carolina -- Livestock and Poultry Statistics, State and County Estimates, Inventory Numbers 1961-1967, June 1967

County & State	1961	1962	1963	1964	1965	1966	1967
All Cattle and Calves: Number on Farms							
Hampton County	6,900	7,600	9,300	9,500	9,700	10,000	10,800
South Carolina	542,000	553,000	570,000	581,000	593,000	599,000	605,000
All Beef Cattle and Calves: Number on Farms (Including Dairy Bulls and Dairy Bull Calves)							
Hampton County	6,200	6,900	8,600	8,900	9,100	9,500	10,400
South Carolina	362,000	381,000	409,000	432,000	457,000	474,000	486,000
Beef Cows and Heifers Two Years Old and Over: Number on Farms							
Hampton County	2,900	3,600	4,100	4,300	4,500	4,700	4,800
South Carolina	179,000	193,000	207,000	219,000	226,000	235,000	237,000
Milk Cows and Heifers Two Years Old and Over: Number on Farms (Including Two-Year-Old Milk Heifers Not Yet Fresh)							
Hampton County	500	450	450	400	400	350	300
South Carolina	116,000	111,000	105,000	99,000	93,000	86,000	83,000
Hogs (Including Pigs): Number on Farms							
Hampton County	11,500	12,600	12,200	11,400	9,800	10,100	11,500
South Carolina	457,000	420,000	420,000	424,000	365,000	376,000	432,000
Chickens (Thousands): Number on Farms (Excluding Commercial Broilers)							
Hampton County	86	89	90	123	121	139	175
South Carolina	5,253	5,584	5,644	5,926	5,864	6,146	7,287

Table 59 -- PRODUCTION OF LIVESTOCK AND POULTRY PRODUCTS (Cont.)

1960 - 1966

County & State	1960	1961	1962	1963	1964	1965	1966
Eggs: Average Number of Layers (Thousands) during Year							
Hampton County	60	68	69	83	93	98	116
South Carolina	3,898	4,185	4,328	4,499	4,484	4,525	4,977
Milk: Annual Average Cows Milked (Number)							
Hampton County	450	450	400	400	350	350	300
South Carolina	108,000	104,000	99,000	94,000	87,000	82,000	77,000

SOURCE: South Carolina -- Livestock and Poultry Statistics, State and County Estimates, Inventory Numbers 1961-1967, June 1967

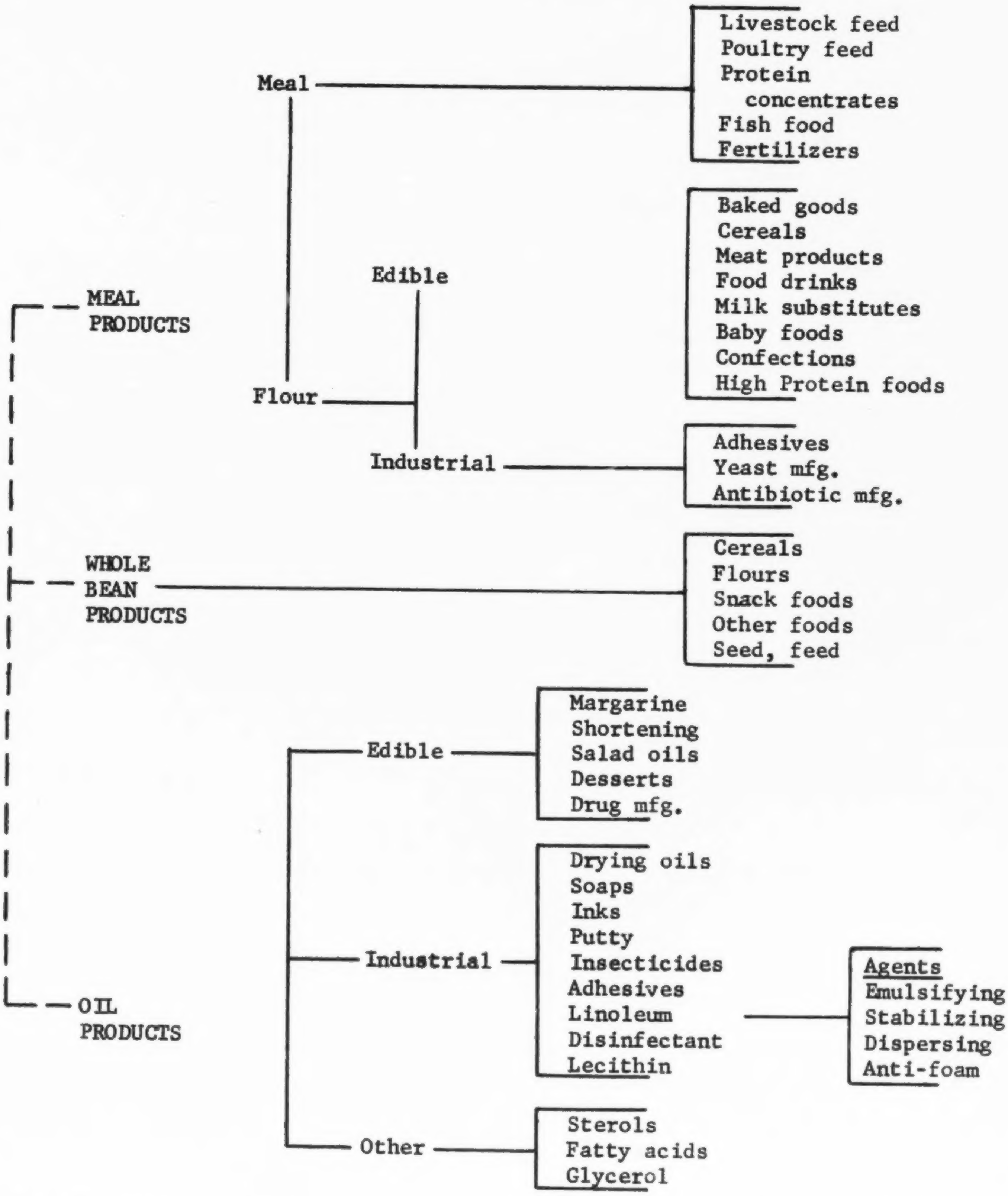
for self-help or cooperative business origination. One luxury area might well be the growing and packing of aromatic seeds and condiments which grow well in the Three County Area, especially the higher parts. There is a market, represented by a trade trend upward as luxury food consumption increases, now being served by $15 million a year paid in foreign exchange for 100 million pounds of imports. There is considerable hand labor required, and only a low wage area such as the Three County Area could expect to compete with foreign wages. The packaging activity of products grown on owned or contract small farms is what is recommended. A National Market would be served, and shipping costs could be born. Only Secondary and Semi-Skilled labor is required to produce this Final Product. There are a number of sufficient sites throughout the Three County Area, and the initial marketing effort might be assisted by imported items brought in through Charleston or Port Royal. There are several agricultural seed processors in the area who could expand in this way. (U.S.Dept.Agri.,Foreign Agriculture,III,36,p.36)

Most important is sesame seed, used both as bakery seed and crushed for cooking oil, up from 17 million pounds in 1960 to 25 million in 1964. Most comes from Nicaragua, although some is grown in Texas. Next in volume is mustard seed from Canada and Denmark. Capsicum (red pepper) doubled to 11.4 million pounds mostly from Mexico and Japan. Paprika ranks fourth with 10 million pounds, mostly from Spain, Morocco, Yugoslavia. Poppyseed was 8.5 million pounds at $1 million, mostly from Netherlands and Poland. Sage, celery seed, caraway, cumin, coriander, anise, fennel, origanum, and laurel all grow in the United States but are imported for commercial use.

There has been a skyrocketing increase since 1960 in the growing of Soybeans in South Carolina, including the Three County Area. The 1965 harvest was reported by the State Crop Reporter as utilizing the most cropped acres in the state of any market crop, and equalled $48.3 million dollars value. Plantings then were up 20% over 1964 and have continued to gain. Many of the states in the Charleston and Port Royal tributary area are large Soybean growers. A large tonnage of these beans are exported, mostly to Japan where they are used both in food products and industrial products. In Hampton there is a plant of the Southern Soya Corp processing beans mostly for livestock feed. A very limited production does not at all cover the possibilities. A logical expansion industry for Estill would be to increase the production of oil, using the meal from crushing in feed for the growing livestock industry of South Carolina and Georgia. The oil supply available should be used to entice a chemical company interested in some of the organic products indicated in Fig. 1 which shows a few of the soybean products. The marketing of these products might be directly to consumers or could be bulk production for producers elsewhere. It seems poor business for an area growing as many beans as the Three County Area does to sell so many of them as beans when they can be such a sound foundation for industry. This is especially true when we consider that even at 1957 wage rates soybeans returned a better farm profit than other crops (See "Soybean Farming," National Soybean Processors Assoc., 1961, Chicago).

One very popular human consumption area is in the producing of non-dairy cream-substitutes, baby formulae, dessert toppings, and diet supplements for those with special diet restrictions. The regional production plant of such a food manufacturer specializing in these soybean products might well be interested in an area with the advantages of the Three County Area. Because these products do not require the same refrigeration as do fresh dairy products they can be marketed over a wider area.

Table 60 -- SHOWING PRODUCTS DERIVED FROM SOYBEANS, MEAL, AND OIL



SOURCE: BGR-Business & Government Review - Sept.-Oct. 1965, Univ. of Missouri

SELECTED INDUSTRIES

When most people think of a manufacturing plant they think of one making a specific product. Few plants today are limited to a single product, although when the decision is made to relocate a plant or establish a branch it is usually to produce something specific. The review of over 180 SIC codes according to standard location factors has yielded many possibilities, and found the following product industries as examples of those most compatible with the resources of the Three County Area. The parent corporations selling these and related products should be solicited.

Farm Machinery

Although agricultural employment is declining, the use of farm machinery and equipment is increasing. The machines to be produced might be oriented to Southern agricultural technology or to forest harvesting. The prototype equipment will already exist, and what is anticipated is a branch plant located near a market distribution point, including the overseas market, which has been very good for American farm equipment producers. This would probably be only an assembly plant, at first, but could grow to one manufacturing the entire product.

Farm Machinery is grouped with construction, mining and material handling machinery and these SIC codes have an unfavorable Economy of Scale for the metal parts, but not necessarily for the complete machine, which upon assembly becomes bulky and difficult to ship, although the cost of shipment is low in relation to the dollar value of the product, the same as an automobile. Shipping costs could be a consideration in locating, nevertheless. The production for a given agricultural use, such as Cotton Picking or Liquid Fertilizer Application is a Standard Product, but there are often local modifications and production runs are short.

The industry uses Skilled Labor and Semi-skilled labor and for this reason is often Urban Oriented, but any workers needed could be trained by TEC Special Schools, and there could be a desire to get away from the high costs of urban living, including the much higher wage rates in urban areas. The market proposed is Regional.

Electrical Machinery

This has been South Carolina's fastest growing industry recently and is expected to continue to grow. The segment considered is Electronic components and Radio, Television, transmitting, signalling, and detection equipment. One report on this field (Claude Monroe and Raleigh A. Garcia "Electronic Components," University of Missouri, Columbia, Missouri, 1965) states, "The components sector will include producers of receiving tubes, resistors, semi-conductor devices, television picture tubes, transformers, reactors, capacitors, connectors, quartz crystals, power and special purpose tubes, and relays." What is suggested is a "parts business" rather than an end product, since that portion tends to be located near large population centers, whereas the component portion is a comparatively footloose industry. This is a fast changing business, as witness General Electric closing down a vacumn tube plant in Alabama only five years after spending $4 million on enlarging the plant, when its product was made obsolesent by transistors.

Since this is also the nations fastest-growing industry there should be no lack of market reachable by truck or air-freight—especially appropriate because of the light weight of many of these parts. This growth is expected to be largely in the consumer portion rather than in military, so defense spending changes should have little effect. Within the end use industry the color television and electronic computer segments have grown fastest but tape recording developments show promise.

The major factors said to be important to location by industry spokesmen which are found in the Three County Area seem to be transportation, clean air and water supply, and low cost labor in adequate supply, trained or trainable. The educational facilities available to engineers employed are important in some cases for development companies. The tax structure in South Carolina is uniform throughout the state except for educational (school taxes), and in most of the Three County Area all taxes on a new industrial plant are forgiven for a period of five years. Clean air is important because lint and dust destroy quality in many components. Clean water is important to flush away minute dust particles. The TEC Special Schools can train any skilled and semi skilled workers required. The TEC Centers assure an electronics plant of a continuous supply of upcoming employees.

Fabricated Rubber Products

This industry is very closely related to miscellaneous plastic products since the "notion" type product, usually selling at a variety store price may be made of either. Products made of reclaimed rubber, gutta-percha, balata, or gutta-siak are included as are rubberized fabrics and vulcanized rubber clothing even when made of synthetic material. This has also been a high growth industry in the recent past. Rubber toys, face masks, bathing caps, industrial and mechanical rubber and fabric parts and novelties and rubber specialties have all been very popular with consumers. There is spillover in this industry to include raw material in the form of sheets, rods and tubes.

The Fabricated Rubber Products industry is Labor Intensive and does not require a large capital investment per worker. While the product is Standard and a Final Product, there are many varieties and quantities produced, both simple and repetitive and somewhat craft-like. There is a close relationship to the Toy industry next recommended. There is some concentration dependence in that most producers locate near the rubber plants, but raw material transport costs are low, new synthetics are replacing rubber and a firm considering relocation is more interested in getting away from competition than in materials. Past production has been Urban Oriented, but this has been largely a result of seeking Secondary and Cheap labor. There is a current wave of relocation, and wage costs are more important than urbanity. The transportation costs can be born to a National market since costs are low in relation to the value of the product. Highest profits are in the industrial production segment, with a budding boom in plated plastics to replace metal parts.

Toys, Sporting Goods

The increase in leisure characteristic of our American life has greatly increased the market demand for Toys and Sporting Goods. The demand for "adult toys," including fishing & boating equipment, beach and patio equipment is expected to continue to increase by 10 - 20% a year as the larger proportion of young adults in the population buy their own recreation equipment. The raw materials needed include wood, which is plentyful; fiber glass, which is used in two boat factories already active within the Three County Area; plastics and laminations, such as are produced at Micarta; and metal parts which could be locally fabricated, or shipped down from the machine shops of Orangeburg in the next county. South Carolina is now producing in nine plants and vending nationally a line of fishing equipment, bows and arrows, dolls, doll clothes, and game boards. This proves the location can serve the national market.

This industry is Labor Intensive and does not require a large capital investment. Many single product companies in the industry are "back yard" plants, proving the tractability of the industry to small business and self-help installations. Marketing seems more important than production and models or products themselves change rapidly. The product is Standard and amenable to mass production on simple machines for a final consumers product. Some of the most profitable in this industry make give-away premiums, which they ship for the coupon merchandizers.

The Sporting Goods industry has been Urban Oriented, but this is changing as producers seek low wage areas away from the city to serve a National Market. Only the sales office is far away, since the product can bear a shipping cost which is Low in relation to their value. That is the only way national distribution can be built up. Of greatest importance is that this industry uses Secondary and Cheap labor with very little skilled labor required since most mechanical work is subcontracted. The Three County Area proximity to an excellent truck highway system is one of its strong selling points. Even the airport is important for the occassional designer arrival, and model change flights to "the toy show."

Costume Jewelry and Notions

This last example of a type of industry which might well be interested in locating a plant in the Three County Area is another seeker after Secondary and Cheap labor. The industry, which has been Urban Oriented, is leaving the city where the original location was often a matter of chance, except as certain products may be Foreward Linked to supply the Apparel industry. The recent growth in Apparel production in the South has created a market, since costume jewelry and ornamental buttons are often attached by the garment manufacturer. Designers and sales offices may stay urban, but production is moving away. The availability of TEC Special Schools for training the Special labor required in some segments of this industry are an important consideration. Products produced normally move by truck and have a Low transportation cost in relation to the value of the product.

The costume jewelry and ornamentation market is a growing one, helped along by an increasing number of youth easily persuaded to adopt fads. There is also a growing export market as developing economies permit ornamentation with these low cost items.

The precious jewelry, findings and materials industry is also a growing one, helped along by an affluent society. In terms of location factors its chief difference from costume jewelry is the demand for semi-skilled rather than Cheap labor. Since TEC Special Schools could train these workers then both segments of the jewelry industry might be approached.

BARGE SITES INVITE CHEMICALS

The development of a Three County Area representation in the Chemical Industry greater than the single formaldehyde plant now resident, which located to serve Micarta in Hampton, depends on development of barge transportation. There are several sites where barge transportation might be instituted.

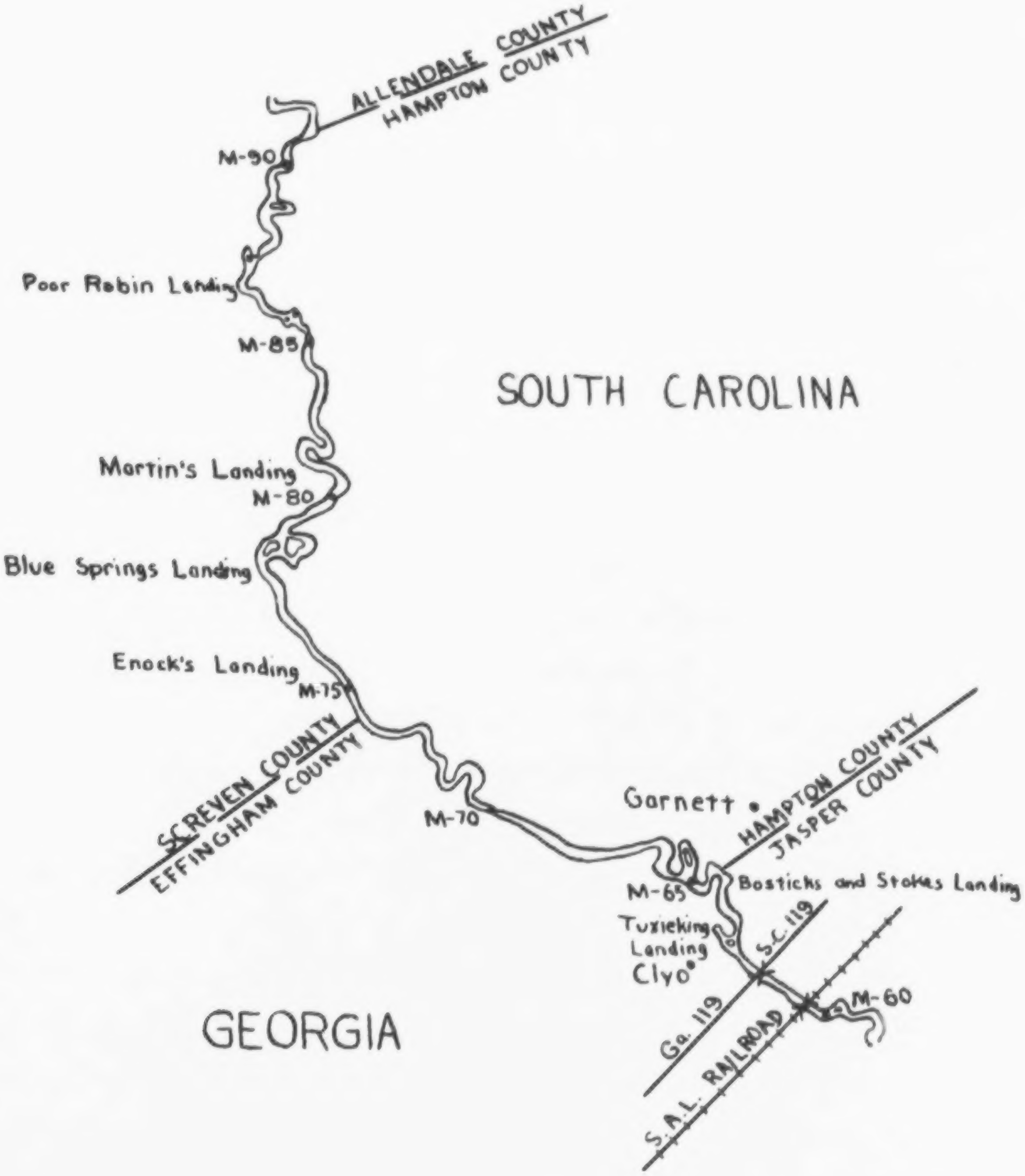
Perhaps the most quickly developed industrial site for a chemical installation is the Stokes Bluff site on the Savannah River, which lies partly in Hampton County, with the remainder in Jasper County. While much of the Hampton County shore line on the Savannah is swampy, the site on this 500 acres of sandy clay is well above flood level. In river boat days it was called Stokes Landing. There is a barge depth on the Savannah at this point of nine feet about 42 miles (60 river miles) into the Harbor of Savannah where a small chemical industry and an oil refinery operation have been established. There are about 20 establishments there including five devoted to Gum and Wood chemicals, five Industrial Chemicals, four Agricultural chemicals, and representatives of firms in Drugs, Coal tar Intermediates, and Cleaning compounds, cosmetics and perfumes. Further up the Savannah at Augusta a Chemical empire is building up with major Chemical processers dealing in nitrogen fertilizer, synthetic detergents, sodium silicates, tripolyphosphates and phosphoric acid, chlorine and caustic soda, caprolactam, and ammonium sulfate. In the paper and pulp catagory, 200 miles up the Savannah are located hard-wood-utilizing paper-plants, pine pulp mills, a glassine paper plant, a bleached paperboard plant, a newsprint mill, and paper-using container plants.

The Stokes Bluff site is served by the Seaboard Air Line Railroad whose General Manager of Industrial Development, Mr. Robert N. Hoskins, Richmond, Virginia showed the site. The highway connection is that between Garnett, S. C. and Clyo, Ga. so that both states could be served from this point—the last point upriver before Allendale where a highway bridge crosses the Savannah. Interstate 95 will cross about 30 miles downriver and by way of Interstate 16 when completed provide a connection to Atlanta, Ga. There is electricity, natural gas, and a daily water flow in the Savannah river of 1,829,077,000 gallons. A 10 inch well in this area about 500-800 feet deep will pump about 400 Gpm. There are no towns nearby to object, but there is adequate labor reserves within commuting distance. This site is sketched in Map 5.

A second sample site is that described locally as the Edisto River, Jacksonboro site of 825 acres on U. S. 17 served by the Atlantic Coast Line. The 12 foot barge depth is some 18 miles down river at Watts Cut and only a 4 foot depth is maintained by the United States Corps of Engineers at this site, but given sufficient traffic, the 12 foot depth could be dredged to the site. There is no waste disposal problem into-river with a daily flow averaging 1,576,000 gallons per day and wells providing 500 Gpm. A 110 kv Power line is near-by and the area draws on an estimated population of a quarter million within a 30-mile radius.

There are other sites at rail road river crossings in Colleton County, but the site proposed here is at the head of St. Helena Sound. What is proposed is that the whole Sound area be developed, which would require the cooperation of bordering Beaufort County. Considerable dredging, road building, and site development would be required, but the prospects are good enough to justify a feasibility study. The intercoastal waterway runs

Map 5: MAP SHOWING STOKES BLUFF BARGELANDING SITE PARTLY IN JASPER COUNTY



at a 30 foot depth only six miles from the Seaboard Air Line Railroad, with fair State hardtop roads only a dozen miles inland of this site. It is possible that a recreational development complex similar to Hilton Head, which is 20 miles away might be more profitable but industrialization is in the future.

CHEMICAL INDUSTRY

It is at one or more of these barge served sites that a Chemical installation is proposed. In terms of location factors the Chemicals and allied products group, which is a medium growth industry for the next decade, with medium high wages, is generally a Capital Intensive industry. Some segments are more Labor Intensive, namely Cellulosic fibers, Gum and wood chemicals, and Printing Ink. Economies of Scale are characteristic of only Industrial chemicals, Plastics and synthetics, and Cellulosic fibers. This is a Standard Product industry. Most segments are Intermediate Product producers and send their output on to final producers. The exceptions are Drugs and Cleaning preparations, perfumes, cosmetics, etc. which also often show some Backward Linkage to other suppliers of chemicals which they formulate. Only Plastics and synthetics, and Printing ink, have a Foreward Linkage locating near their customers. The Chemical industry has tended to be Urban Oriented in that less than 25% of the industry was located outside of the 174 Standard Metropolitan areas, defined by the U. S. Census Bureau last time,but the usual reasons for this, (in order to obtain cost-of-operation savings by utilizing shared services, or tap a low-wage workforce) do not seem applicable. A Chemical plant actually hires a very small workforce in relation to the value of their product, and a large portion of these are professional scientists who relocate with ease. The segments requiring the least skilled workers, and therefore, more compatible with the Hampton and Colleton County work force are Cellulosic fibers, Paints and allied products, Gum and wood chemicals, Agricultural chemicals, and the miscellaneous group Other chemical products. Only the Cellulosic fibers group and Gum and wood chemicals seek Cheap labor. The Transportation Costs for most of the Chemicals group are High per dollar value of the product. Exceptions which show Low are Plastics and synthetics, Cellulosic fibers, and Drugs. Only Industrial chemicals, and Gum and wood chemicals are Raw Materials Oriented. In the Port Oriented slot along with Petroleum, are Industrial and Agricultural chemicals. Industrial inorganic and organic chemicals, Cellulosic fibers, Cleaning preparations, cosmetics, perfumes, etc., Paints and allied products, and Agricultural chemicals serve Regional Markets. Turpentine and Naval Stores: As a consideration it should be remembered that this area along the Savannah is the last in South Carolina where turpentine is harvested, nine crops being made last year. There is a small naval stores industry in Savannah which processes these crops. Although plants are small this is a potential industry. Synthetic Fibers Industry: On the basis of location factors the best industry might be Cellulosic fibers. There are several new synthetic fiber plants in South Carolina within the last two years. None of these new plants are in the low country, however, and all of the other industrial giants might be approached. The most promising fiber would appear to be Rayon and acetates for which the wood pulp and cotton linters commonly used as raw material are readily available. By barging in ethylene glycol a polyester fiber might be possible. Similarly by barging in caprolactum the Nylons become possible, whereas acrylic fibers require acrylonitrile. Many of these may be replaced by polypropylene, but all are used in the industries already recommended. Vinyl chloride could be barged in from a refinery for polymerization to polyvinyl chloride, then used as raw material for all the vinyl products. Because many of these operations are usually located near an oil refinery with the liquid raw material delivered by pipeline, the most likely developer of such a barged raw-material operation would be one of the oil companies. Raw Materials by Barge: Equally strong appear to be Agricultural chemicals, Drugs, and Cleaning preparations, cosmetics, perfumes, etc. The Raw Materials lack which hampers Industrial chemicals could be overcome by barge. Barge delivery from Savannah oil refineries of intermediates, or, at a greater distance, from the Gulf coast, make possible a start in petrochemicals. Lack of tanker dockage on a 30-35 foot channel rules out oil refining and most petroleum industry.

Suggestions can be made for chemical processing, but it is probable that any approach to sell the site locations will have to be made in general terms with the building and marketing plans of a given firm guiding the actual product choice. None of these are presented from a technical physical-chemistry position, but from a location factors and marketing posture. The assumed qualifications of the sites indicated for satisfying the needs of the Chemical industry rest on delivery of raw material and some shipment by barge, plus the lowered railroad rate concessions this competition makes possible.

They do meet the standard needs of the Chemical industry at these sites as shown in the data for Hampton County and Colleton County. Stated, these are: markets throughout the entire tributary area of the Charleston port, particularly on a back-haul basis, and locally in an extensive agriculture employment, where the chemical useage has tripled in the 1960's. The major South Carolina industries of Paper and pulp, and Textiles have many chemical needs, and such innovations as paper clothing and permanent press fabric are increasing the amounts required. A growing Furniture and Wood Products industry is also increasing the amounts of paint and finish chemicals required. Other chemical using growth industries in the State would be Apparel and other fabricated products, Furniture and fixtures, especially cabinets and fabricated millwork prefinished, Rubber and plastic products, and Metal plating and finishing.

Needed labor is available and skilled workers can be trained by the TEC Special Schools. Wage rates have tended to remain below S. C. averages while the unemployment index stays comparatively high, with a shortage only among skilled workers, particularly those with a metal trades background. The large quantities of fresh water available in the Savannah River and Edisto River make these sites somewhat better than St. Helena Sound but there is adequate fresh water there in the Combahee River which empties here. Fresh water aquifers in this area are known to force an underground stream as much as six feet above ground level in springs as underground rivers from the Piedmont flow under the coast area to empty out to sea. Waste disposal through dilution remains a practical method.

Phosphates and Sulphur

Barge delivery of Florida phosphate rock supplemented by overland delivery or barge delivery of South Carolina phosphates from nearby Beaufort County would make possible a phosphoric acid operation. The curse of the Houston, Texas phosphate processors, huge piles of unuseable gypsum resulting from wet processing Florida phosphate rock, could be used here to build up nearby swamp areas. Experimental use as a replacement for land plaster in desalting marsh land might aid in recovery activities in the coastal salt swamp as pilot studies prove to Conservation interests that this is a wise, or economical use for extensive rice fields in this area abandoned because of salt water intrusion, and now not even very useful as wild life refuge centers. New uses in cleaning compounds, detergents, foods for animals and humans for phosphates makes this an important field.

The Gulf waterway across Florida increases the opportunity for barge delivery (in hot liquid state) of sulfur for use in making sulfuric acid. That acid is used by many other industries and in the Chemical industry for making other acids including the phosphoric acid mentioned above. Production of Sulphuric acid in the U. S. went up 15% last year. There are 8 producers in South Carolina now but none in this area.

The final example chosen is ammonia for agricultural fertilizers although this use is being phased out as urea as a nitrogen source takes over. The raw material might be natural gas (available in the area, but expensive because piped across country) liquified and delivered by barge. Intermediates or propane might be barged from a petroleum refinery. Ammonia there is sometimes a by-product of producing hydrogen needed in the refinery process for cleaning sour crude. If a direct Ammonia producing activity is instituted it might produce and vend excess hydrogen to food-oil companies. The ways in which these "building blocks" are used by the Chemical plants to meet customer needs is not here specified, and the real chemical opportunity may be in some researcher's test tube now, awaiting industrial application, popularization, and exploitation. Whatever industrial use is made of the beginning plant other chemical operations such as chlorine and cleaning compounds will follow.

Paper and Pulp

Before leaving the consideration of port sites and the Chemical industry, it should be noted that these same sites are also attractive for locating a paper and pulp plant, attracted by the large pulp-wood reserves nearby and which can be delivered on the river.

This concludes the brief review of industry found compatible with the resources of the Three County Area. There are many possible industries and they can be attracted in many ways. At times those most easily acquired are not the best final fit. If concentrated attention is given to improving the community itself, then selling the location and specific sites, industry will come.

Before leaving new industry possibilities a few words should be said about some areas of possible regional change not so clearly the standard procedure of convincing a new plant to move into the area.

OCEANOGRAPHY

The possibility of obtaining minerals from the bottom of the sea as raw materials has been mentioned, and extended to using the sands of the beaches (as ilmenite sands are now used off the Florida coast), but these are not the only possibilities. The science of inner space, largely marine science, is making its bid for Federal support and some say oceanography will have ten times the research support that outer space exploration has enjoyed since Sputnik I. Many American corporations with space experience are turning to oceanography and indications are that a greater portion of the work will be originated by private companies than has been the case in outer space. Only Colleton County of the three counties has a sea coast, but if the administrative unit includes Beaufort as we have advocated for the development of St. Helena Sound this location could become the marine science center for the State. Its present isolation and lack of development would then be an advantage. Working relationships should coordinate with the State Port Authority, Shellfish Commission, etc. Some tie-in should be made with the Universities of the State. It is rumored that most of the Federal support until 1980 will be for educational programs, and research programs conducted at teaching centers studying the marine environment. An oceanography technology center set up at St. Helena Sound might be jointly staffed by the institutions of higher learning in the State including TEC to service industry interested. Likely subjects to be dealt with might include:

Conservation

Shore stabilization and prevention of beach erosion

Salt swamp and marine wildlife refuges

Control of destructive plant and animal life, including microbic

Dredging, fill, and spoil disposal

Commercial-Marine Science

Shellfish production and protection

Crustaceans, especially shrimp in ponds

Fishing, commercial and sport, in-shore and deep water

Shell, sand and gravel removal effects and relation to conservation

Recreation and Tourism

Public and private beach parks

Sport boating traffic and marina regulation

Piers, docks, and shipping aids below Port level

Scenic Marine areas and drives

Marine Pollution Control

Inland and coast industrial wastes

Population sewage and rivers

Off-shore dumping, flushing and hazards

Ecology of botanical, zoological Marine life

Health and environment control in marine setting, among technologists, including sport divers.

TOURISM AND RECREATION

This technical assistance project has dealt primarily with the potential for light manufacturing industry, but the benefits to the Three County Area economy from promoting tourism, travel, and recreation may be even greater. The Resources of the area are equally well fitted to tourism as to industry and the mild climate could make this the next winter vacation mecca. Just as the spring college crowd has been drawn up from Florida to the Carolina coast, so might the late winter and spring Florida vacation crowd. The State of South Carolina now sees these "free spenders" largely as pass-through traffic, seldom stopping and poorly informed as to attractions.

Several recreation and tourist promotion economic projects underway at the University of South Carolina at this time have been coordinated with our study efforts, but are not reported here. This passing mention is a reminder that the Motels, Restaurants, and services along this main Florida tourist conduit are a major part of the existing business community and should have a voice in economic planning. There may well be more local employment provided by the recreational development of St. Helena Sound than by its industrialization, for example, but whether the one or the other makes the greatest overall contribution to the economy of the State is a question which must be left to broader planning agencies. The development of the tourism potential of this location is probably beyond local resources. An industrial corporation specializing in such large scale development, such as Host Corporation, Kerr County Land Company, Seven-Flags Corp, or Disney enterprises might well be approached for cooperation. The effect of the opening of Interstate 95 will be salutatory for industry as it speeds up truck transportation and widens the market area; that same opening will be deleterious to the extensive service industry built up on the base of travelers using U. S. 17 and 17A, but these changes concern the Chamber of Commerce more than they do those who have industrial sites to promote.

We turn our attention now to the requirement for an evaluation of the manpower development programs and manpower agency actions to be found in effect in the Three County Area.

PART THREE: SURVEY OF MANPOWER DEVELOPMENT PROGRAMS

The scope of this project includes an investigation of manpower development activities in the Three County Area. These programs are needed to facilitate local adjustment for industrial development and meet the requirements of training for suitable commercial and industrial opportunities. Information as to the specific programs, results, and plans is best obtained from local authorities and manpower utilization agencies. Evaluation can only be made on the spot. Overall recommendations for a coordinated series of programs are made later in this discussion but immediate recommendations were made in discussions at the time. The most immediate results were obtained through cooperation of local industrial development authorities, incoming industrialists and the Special Schools provided by the State of South Carolina to train new employees for incoming or expanding industrial plants. During this study five Special Schools originated in the Three County Area with several more potential Special Schools being arranged. These will be discussed further after a review of other programs.

Manpower development and training programs are concerned primarily with adults who have already completed their formal education and are now full-time workers or seeking full-time jobs. Only to a minor extent are those still of school age involved and this is through vocational education, especially high school training of office workers, agricultural professionals, and the usual school shop classes. Such education is important and had it been extensively available in the past there would be less of a manpower development need at present. A special aspect of the problem in the Three County Area is the presence in the work force of a considerable number of men and women of very low educational attainment. Their numbers are suggested in the Human Resources section. Some of these have never been to school; some have less than fifth grade achievement although they may have attended low-level schools more than five years; all are considered functional illiterates. To provide education to enable these individuals to benefit from job training in the usual industrial setting is as much of a problem as providing the industrial training itself. This is a statewide problem and the solutions are state wide.

At the time this survey started there was very little manpower development activity underway in the Three County Area. None of the Manpower Development and Training activities which started in February 1964 were held in the Three County Area. Such vocational education as was available was checked. It seemed to serve primarily as an exhibit to impress those looking over the area for possible plant location, and to equip a few individuals for home repairs. The local school people did not show they felt bound to help industry. A few STEP (Special Training for Economic Progress) programs under MDTA were underway in nearby counties and a few Three County Area unemployed had been referred to these programs. Visits to these programs were arranged and shortly a STEP training program for Farm Equipment operators was underway in make-shift quarters, supervised by local educators. Attendance at Charleston STEP from Dorchester County and at Orangeburg STEP from residents of Hampton County, and from Colleton County to both was increased, largely as the result of special efforts of the three local offices of the South Carolina Employment Commission. The town of Walterboro and the town of Hampton were home offices for Employment Office branches which served these counties. Dorchester is served from Charleston along with Berkeley County. Not a great deal of assistance was apparent from local educators nor by industrial development commissions. This was understandable because of local conditions in the schools of the area and since the majority of the training programs were only slightly oriented to industrial employment. Those which were more industrial in nature were distant from the population centers and Employment Offices in the Three County Area. This lack of programs was not a failure on anyone's part, since the statewide program did train a lot of people. Some idea of the numbers and type of jobs can be obtained from Table 61 . Programs of training are outlined by Vocational Education and Technical Education Committee representatives, but courses are not started unless the Employment Security Commission certifies that there will probably be jobs available in the field of activity for which training is offered. This requirement has limited the number of employees trained for such commercial occupations as Stenographer and Draftsman in the State, as has the general aim of these programs which is fixed on school drop-outs and those needing basic education along with vocational training. In addition, the Employment Service selects students for training and has the responsibility of persuading an adult who wants a job that he ought to go back to school. A very small transportation and maintenance payment was often the motivation rather than any real interest in learning to read and write or in training for a job. As witness to this disinterest, since the start of the program about thirty out of every one hundred who are enrolled in a course drop out before graduation, and only about a quarter of these leave to accept employment, usually in a different field from that for which training is given. On the other hand, over 8,500 students have been given training and, in a follow-up of graduates throughout the State who completed training during the year ending May 1966 the Employment Service found

Table 61--SHOWING THE VARIETY OF TYPES OF TRAINING UNDERWAY IN THE MTDA (STEP) TRAINING PROGRAM, WHERE ENROLLEES ARE THOSE WHO ACCEPTED TRAINING OFFERED TO 9,677 UNEMPLOYED

Type of Training	Enrollment At Start
Air-Conditioning Mechanic	61
Airplane Mechanic	18
All-round Farm Machine Operator	349
Auto Body Repairman	79
Auto Mechanic	349
Auto Service Station Attendant	141
Auto Service Station Mechanic	174
Bricklayer	714
Carpenter	877
Chambermaid	157
Chassis Assembler	42
Clerk, General Office	76
Clerk-Stenographer	394
Commercial Draftsman	13
Cook (hotel & rest.)	138
Dentist's Assistant	20
Diesel Mechanic	26
Draftsman	17
Duplicating Machine Operator	39
Furniture Mover	18
Furniture Repairman	150
Grounds Keeper	36
Heavy Equipment Operator	79
Hospital Orderly & Nurse Aide	1145
Housekeeper-Homemaker	142
Janitor	64
Kitchen Helper	104
Landscape Gardener	200
Licensed Practical Nurse	121
Machine Operator General	139
Machine Tool Operator	226
Maintenance Man	30
Meat Cutter	34
Multilith Offset	18
On-the-Job Training Projects	283
Painter	65
Presser, Hand	20
Presser, Machine	66
Presser, Machine and Hand	20
Salesperson	36
Sewing Machine Operator	637
Sewing Machine Repairman	36
Small Gasoline Engine Repairman	28
Tabulating Machine Operator	39
Textile Operator	118
Waiter, Formal	14
Waiter-Waitress	128
Welder	187
Youth Multi-Occupational Projects	1012
	8879

SOURCE: S. C. Employment Security Commission
Research and Statistics Section
September 15, 1966

85% either employed or out of the labor force, and 68% were in jobs related to the training received. This is an excellent program showing. A group of hard-working dedicated staff people have done and are doing a good job at the level at which they aimed and within the funds available. At the same time the number of individuals in the State of school age and not in school is almost the largest in proportion to adult population reported in the United States. The future activities of this project are not clear at this point, since funding is nearing an end, and major attention has been turned towards helping the under-19 age group with large Youth STEP continuation-school centers in Charleston and Columbia. Plans include a shift over to an Office of Economic Opportunity funded project to work in the basic education field with MDTA training concentrating on job training for specific forecast openings. However good this has been for the State of South Carolina as a whole, however, it has not done much to facilitate adjustment for industrial development in the Three County Area, nor have admonitions to local leaders to take better advantage of the opportunities had any noticeable effects. Only in Dorchester County (Charleston Center) have results been shown.

VOCATIONAL EDUCATION

Vocational education in South Carolina in 1964 was lagging. The special machinery needed for industrial training could not be provided from local school budgets already straining under increased enrollments and higher standards of general education. The Vocational Education Division of the State Department of Education in cooperation with local school districts launched a gigantic expansion program under the Vocational Act of 1963 which provided matching funds to qualify more youth for jobs in the industrialized state. This expansion plan is aimed at the construction of 46 to 52 Area Vocational

Schools to serve all areas of the State on a consolidated basis. Students are transported from the high school where they take academic studies to a central location where expensive training equipment can be assembled for vocational training. Existing local facilities will also be improved, especially in the larger schools. This educational advancement would have little manpower development significance if, in addition to high school students, provisions were not also made for continuation education for adults in the new occupational fields and to up-grade employable skills. The first four Area Vocational Schools have been opened at Lancaster, Pickens, Union, and Lower Richland. Another four are slated for Hartsville, Florence, Aiken, and Denmark. If funds are found for matching purposes in the communities a half dozen are scheduled for next year. Likely locations appear to be Marion-Mullins, Camden, Oconee, Cherokee, Spartanburg, Chester, and Greenwood. A considerable expansion of Federal, State, and local funds will be necessary to meet a proposed deadline of an area Vocational School within bus-distance of all parts of the State by the early 1970's. If that goal is reached there will be such a school built in each of the three counties as well as in Jasper County and in Beaufort County. Both of these counties now have leased space devoted to the MDTA (STEP) program. Efforts have been made to coordinate adult basic education programs with this expansion program, but there appears to be some conflict among agencies. (This has been evident both at the State level and at the local School Board level where the mission of the schools has been interpreted with an ambivalent attitude towards out-of-school students and little responsibility has been accepted for general community improvement through industrial growth.) Adult manpower development programs in the Three County Area have not yet been helped greatly by any programs of Vocational Education or Adult Education except as a by-product of normal high school operation, but as local school facilities are improved, as the Area Vocational Schools are built during the next five or six years and the adult programs are offered, then the Three County Area will be able to set up local school programs to meet the requirements of employers. Some of the industrial skills offered by Vocational schools in South Carolina are shown in Table 62. As the demand for these develops in the Three County Area courses could be offered there.

TECHNICAL EDUCATION

At present the most important manpower development programs available for the Three County Area are those established by the South Carolina State Technical Education Committee. This committee consists of one representative from each congressional district, the State Superintendent of Education, and Director of the State Development Board working under the Governor. This committee is also the statewide training agency for MDTA and thus helped set up the STEP program (Special Training for Economic Progress). TEC coordinates the efforts of several state agencies each of which makes its contribution to the attraction of new industries to South Carolina through the availability of trained workers. The State Development Board plays an important part, but the State Department of Education, Division of Vocational Education, and the Employment Security Commission have their roles. In the initial period, 1961-1962, TEC established a Special Schools program to train workers for new plants coming to the State. A Special School training course using machines borrowed from the employer (or purchased by TEC) and instructors approved by the employer assures that a trained work-force is available when the new plant or expanded-plant is ready for occupancy. TEC engineers determine available workers through community surveys and select those for train-

Table 62 -- TRADES AND INDUSTRIES

1963 - 1964

The following lists show the different trade and service occupational areas in which training was given through the South Carolina Public Schools. One hundred sixty-eight different centers in the State offered one or more of the following courses:

PRE-EMPLOYMENT TRAINING (DAY TRADE) OFFERED TO REGULARLY-ENROLLED HIGH SCHOOL STUDENTS AND ALSO SPECIAL CLASSES FOR ADULTS

Air Conditioning & Refrigeration Mechanics
Auto Body & Fender Repairman
Auto Mechanics
Brick Masons
Cabinet Makers
Carpenters
Cosmetologists
Drafting & Design Technicians
Draftsmen
Electricians
Electronics Technology
Machinists
Mechanics & Repairmen
Office Machine Mechanics
Painters
Plumbers
Power Sewing Machine Operators
Printers
Radio & TV Repairmen
Sheet Metal Workers
Tailors
Textile Mfg. Occupations N.E.C.
Textile Workers

DIVERSIFIED OCCUPATIONS (IN SCHOOL - COOPERATIVE)

Air Conditioning & Refrigeration Mechanics
Artists (commercial)
Auto Body & Fender Mechanics & Repairmen
Bakers
Brick & Stone Masons; Tile Setters
Cabinet Makers
Carpenters
Commercial Cooks
Control Clerks - Production
Cosmetologists
Custodians
Dental Technicians
Designers, N.E.C.
Domestic Workers
Draftsman Dyeing & Laundering Occupations
Electricians, Maintenance & Repair
Electric Motor Repairmen
Electronic Technicians
Floral Designers
Furniture Upholsterers & Repairmen
Furriers
Instrument Mechanics & Repairmen
Interior Decorators
Knit Goods, Manufacturing Occupations
Laboratory Assistants (Chemical)
Linemen & Servicemen
Mechanics - Farm Machinery
Mechanics & Repairmen, N.E.C.

Table 62 -- TRADES AND INDUSTRIES (Cont.)

Machinists
Manufacturing Occupations (Clocks & Watches)
Mechanics & Repairmen - Motor Vehicles, N.E.C.
Meatcutters
Motion Picutre Occupations, N.E.C.
Motion Picture Projectionists
Morticians
Hotel Maids & Housemen
Nurses Aides (Hospital Attendants)
Office Machines Mechanics & Servicemen
Painters - Construction & Maintenance
Painters - Sign
Photographers (Commercial)
Plumbers
Printing & Publishing Occupations,N.E.C.
Radio Operators
Radio & TV Servicemen
Rubber Goods - Manufacturing Occupations
Sewing Machine Operators (Power)
Sheet Metal Workers
Shoe Repairmen
Structural & Ornamental - Metal Workers
Tailors
Telegraph Operators
Textile Manufacturing Dyers
Textile-Manufacturing Occupations
Textile Weavers
Utilities Furnishings Occupations, N.E.C.
Warehousemen
Welders

EVENING EXTENSION FOR UPGRADING EMPLOYED ADULTS AND APPRENTICESHIP

Air Conditioning & Refrigeration Mechanics
Auto Mechanics & Repairmen
Brick Masons
Carpenters
Custodians
Draftsmen
Electricians
Electricians-Maintenance & Repair
Electronics Technicians
Firemen
Foremen & Supervisors
Instrument - Mechanics & Repairmen
Instrument Technicians
Linemen & Servicemen
Loom Fixers
Machinists
Metal Workers - Structural & Ornamental
Photographers (Commercial)
Plumbers
Radio & TV Servicemen
Sewing Machine Operators (Power)
Sheet Metal Workers
Tailors
Textile Manufacturing Occupations, N.E.C.
Textile Weavers
Welders

ing on a lead-time schedule to assure that those trained will be able to move from training to the job. TEC pays the instructors, but trainees attend on their own. The trainees are not guaranteed employment at completion although almost all who do complete a Special Schools course are then employed. Prior to the opening of the first TEC center in 1962 some 475 workers were trained for 25 different employers and by mid 1966 over 12,843 more had been trained in Special Schools for about 184 employers. At present five of these Special Schools are underway in the Three County Area and one outside (100 employees for AVCO - Lycoming in Charleston) has a number of Dorchester residents enrolled. Other TEC Special Schools are under discussion.

TEC SPECIAL SCHOOLS

Whenever possible the Special Schools are conducted in a TEC center or near the location where the plant is to operate. There are now eleven of these Technical Education Centers authorized or operating in South Carolina. The ones serving the Three County Area are located at Charleston and at Orangeburg and are called Berkeley-Charleston-Dorchester TEC and Orangeburg-Calhoun TEC. There are at present no plans to build a TEC Center in the Three County Area but students do attend who live in the Three County Area. Under its MDTA program the Technical Education Committee does maintain training facilities at that level in Jasper County and in Beaufort County both of which are in the larger Five County Unit recommended. Over half of the capital investment in a TEC Center comes from the communities where they are located with the rest from State appropriations and the National Defense Education Act. It seems unlikely that the Three County Area can raise these funds in the near future, or should.

The students at a TEC Center must be at least 16, but there is no upper age limit. Technical Education is not a substitute for general education and presumes the equivalent of a high school education and a basic knowledge of science and mathematics. Courses of a wide variety at the engineering technologist and mechanical skills level are offered, both as day and evening classes. Costs are low, and the degree of Associate in Applied Science is offered for those who wish it, or special certificates of proficiency in specific skills for more limited completions. While the travel distance varies from different parts of the Three County Area to a TEC Center almost any student could attend one of these technical institutions within a one-hour driving limit. This technical education offering along with the Special Schools is a real gain to the industry-seekers of the Three County Area and these programs should facilitate industrial development.

THE FIELD SURVEY OF MANPOWER DEVELOPMENT

During the visits and discussions with local authorities both in and around the Three County Area many people were most helpful, especially the students who exhibited their growing skills. They must remain unnamed. Since the S. C. State Technical Education Committee has been commended as the best hope for manpower development in the Three County Area they are named here, followed by a listing of other helpful educators, and those interested in manpower development. Not everyone can be mentioned, but these names will enable anyone seeking further information to establish contact with South Carolina's manpower development leaders. It should be emphasized that none of these individuals are responsible for any conclusions in this report. They helped mightily, but have not approved. The University of South Carolina research team alone bears full responsibility, although we thank all those who helped.

THE TEC COMMITTEE

Robert E. McNair, Governor	State of South Carolina
O. Stanley Smith, Jr. Chairman, Columbia	Second Congressional District
Alvin F. Heinsohn Charleston	First Congressional District
J. Bonner Manly Abbeville	Third Congressional District
Sapp Funderburk Greenville	Fourth Congressional District
Clarence Rowland, Sr. Camden	Fifth Congressional District
J. Boone Aiken Florence	Sixth Congressional District
Jesse T. Anderson	Superintendent of Education
Walter Harper	State Development Board
A. Wade Martin, Coordinator	State Committee for Technical Education

Without prior identification we visited, attended classes as enrolled students, and as visitors in several TEC centers. We also visited Special Schools in session. We found them excellent by either educational institution standards or industrial training standards. Modern teaching methods and equipment, dedicated and experienced instructors, and a far-sighted administration were characteristic of TEC.

Education and Manpower Development

Many people who are interested in both education and manpower development in the State of South Carolina and in the Three County Area have been most helpful in reviewing efforts in this field. A few of those who made this review of manpower development and the related exploration of special aptitudes possible are listed below. This listing is not complete and a few of those who took the most active part are "covered" by a listing of their authorizing superior or sucessor where they have retired, in keeping with departmental public policy.

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We have now reviewed the Manpower Development programs in effect to benefit the Three County Area in the effort to industralize. The impediment to industrial growth represented by a large number of people with low educational achievement, classed as functional illiterates by U. S. Census standards, is a real blockage. The median school years completed by persons 25 years and over is shown by Table 17 for Colleton County to be 7.1 for males and 8.4 for females; by Table 21 for Dorchester County to be 7.9 for males and 8.6 for females; by Table 25 for Hampton County to be 6.8 for males and 8.2 for females, all on the basis of the 1960 Census of Population. Our exploration of Specific aptitudes reported in Table 57 demonstrates that even those of low educational achievement can meet employment standards. The STEP program has demonstrated that the functional illiterates can be successfully trained for employment. TEC Special Schools have demonstrated that available labor can be brought to employers standards in a variety of industries. We turn now to a brief review of current near-term training needs.

NEAR-TERM TRAINING NEEDS

In an effort to make an evaluation and recommendation for manpower development plans in the Three County Area of Colleton, Dorchester and Hampton Counties more meaningful a new extensive re-analysis was made of information obtained from employers in several parts of the State, including the Three County Area. The major source of information was the South Carolina Employment Security Commission. Data was also obtained from several private employment agencies, from employment offices of private employers, from labor agents, from newspapers circulated in the area, and by visits to industrial development specialists in the area. It should be emphasized that the tabulations by occupational category are original with this report and no others share responsibility for these results. Near-term as used here refers to the next two years during which short-term manpower development programs may be expected to complete training plans and produce trained workers. Only job openings are considered. This is not to downgrade general education by schools nor specific adult education programs aimed at improving general literacy by teaching reading and writing, as well as arithmetic, to unemployed or underemployed adults. These efforts improve employability and are valued highly. This survey completes a study of the labor market over a two-year period during which it has changed greatly.

The information presented here must be considered preliminary because it is based on only a sample of about half the employers concerned but is representative of expectations in the State of South Carolina and in the Three County Area at this time. Since certain data could not be obtained, results are not complete, but since the sample used was large and representative, these results may be considered conservative. Past employment experience indicates that actual jobs will be in excess of those suggested by this survey. It is known, of course, that job vacancy reports cannot always indicate training needs. Training needs are apt to be greatly increased by the advent of new industry or by unexpected plant expansions based on increased demand or on new product developments. Employers cannot always report such plans even when they are known two years in advance.

Employers and informants were not always consistent in the use of job classifications but groupings are believed useful since they are interpreted according to the U. S. Department of Labor Dictionary of Occupational Titles and according to usual employment practice. Such inconsistent reporting, however, in certain instances confuses comparisons between various occupational groupings within the Three County Area and the State. This is not great enough, however, to invalidate overall comparisons and results are judged significant.

A study of Table 63 shows that the largest absolute total of short-term manpower development needs — job training requirements — is in the category Factory Male Operatives. This need highlights growing light industry popularity in the Three County Area, Colleton, Dorchester, and Hampton. The overall results, however, of this most extensive survey point up the need for a wide range of training. These current results confirm the results of a similar though less extensive survey made at the beginning of this technical assistance project when unemployment was even higher than current levels. Then, as now, there are jobs in the area which are unfilled although unemployed and underemployed workers abound. The need is for appropriate training, for employer advance identification of training needs, and for employee

Table 63 -- EXPECTED EXPANSION AND REPLACEMENT NEEDS FOR COLLETON, DORCHESTER, AND HAMPTON COUNTIES AND FOR SOUTH CAROLINA

Occupation and County	Total Additional Requirements Reported 1968	1969	Total 2-Year Need	% Change of Employment & Total 2-Year Need
Colleton				
Clerical, Supervisory & Government	39	60	99	106.4
Sales, Retail & Wholesale Trade, Finance, Insurance, Real Estate	87	133	220	94.0
Inst., Domestic & Health Occup.	5	13	18	94.7
Skilled Trades & Maintenance-Repr.	52	73	125	126.3
Factory Female Oper. (Including Textile)	73	115	188	149.2
Factory Male Oper. (Including Textile)	90	143	233	91.0
Heavy Male Occup. & Laborer	23	33	56	207.4
Total			939	110.0
Dorchester				
Clerical, Supervisory & Government	29	36	65	59.1
Sales, Retail & Wholesale Trade, Finance, Insurance, Real Estate	30	33	63	47.4
Inst., Domestic & Health Occup.	10	13	23	67.6
Skilled Trades & Maintenance-Repr.	13	17	30	42.3
Factory Female Oper. (Including Textile)	12	12	24	72.7
Factory Male Oper. (Including Textile)	39	42	81	57.9
Heavy Male Occup. & Laborer	17	24	41	31.3
Total			327	50.2

SOURCE: Author's regrouping of SCES data on labor demand , supplemented by employers, newspapers, agents.

EXPECTED EXPANSION AND REPLACEMENT NEEDS FOR COLLETON, DORCHESTER, AND HAMPTON COUNTIES AND FOR SOUTH CAROLINA

(Table 63 - Cont.)

Occupation and County	Total Additional Requirements Reported 1968	1969	Total 2-Year Need	% Change of Employment & Total 2-Year Need
Hampton				
Clerical, Supervisory & Government	27	32	59	43.4
Sales, Retail & Wholesale Trade, Finance, Insurance, Real Estate	28	32	60	75.9
Inst., Domestic & Health Occup.	14	18	32	72.7
Skilled Trades & Maintenance-Repr.	22	30	52	98.1
Factory Female Oper. (Including Textile)	4	4	8	200.0
Factory Male Oper. (Including Textile)	115	152	267	108.5
Heavy Male Occup. & Laborer	93	182	275	75.5
Total			753	81.3
Three-County				
Clerical, Supervisory & Government	95	128	223	65.8
Sales, Retail & Wholesale Trade, Finance, Insurance, Real Estate	145	198	343	76.9
Inst., Domestic & Health Occup.	29	44	73	75.3
Skilled Trades & Maintenance-Repr.	87	120	207	92.8
Factory Female Oper. (Including Textile)	89	131	220	135.0
Factory Male Oper. (Including Textile)	244	337	581	90.5
Heavy Male Occup. & Laborer	133	239	372	71.3
Total			2,019	83.0

EXPECTED EXPANSION AND REPLACEMENT NEEDS FOR COLLETON, DORCHESTER, AND HAMPTON COUNTIES AND FOR SOUTH CAROLINA

(Table 63 - Cont.)

Occupation and County	Total Additional Requirements Reported 1968	1969	Total 2-Year Need	% Change of Employment & Total 2-Year Need
South Carolina				
Clerical, Supervisory & Government	3,929	6,204	10,133	47.4
Sales, Retail & Wholesale Trade, Finance, Insurance, Real Estate	3,175	5,113	8,288	40.9
Inst., Domestic & Health Occup.	1,747	2,796	4,543	44.4
Skilled Trades & Maintenance-Repr.	5,267	8,324	13,591	64.3
Factory Female Oper. (Including Textile)	6,013	9,784	15,797	75.4
Factory Male Oper. (Including Textile)	7,158	11,263	18,421	35.5
Heavy Male Occup. & Laborer	1,395	2,147	3,542	64.1
Total			74,315	49.1

recognition of the desirability of training.

The most evident detail revealed after a brief study of the figures contained in the charts shows that the largest absolute total of short-term manpower development needs is in the category of Factory Male Operatives. For Colleton and Dorchester Counties, the three-county total, and the State total, this category ranks first in total additional two-year need, while in Hampton County it ranks a close second to Heavy Male Operative needs. Under all five area rankings, the need for employees is almost double that of the average two-year need for the remaining categories. The three-county total need is 582 (Colleton = 233, Dorchester = 81, Hampton = 267) while the State need for the same period is 18,421.

In terms of percentage change of employment over the two-year period under study there is little similarity in the figures. For Factory Male Operatives the two-year percentage increase in need for Colleton County is 91%, for Dorchester, 57.9%, for Hampton, 108.5%, which yields a three-county combined increase of 90.5% as compared to the projected State increase of 35.5%. This is the lowest of all percentage increases in the State for the various categories of occupations (despite the fact that the total of 18,421 is the highest in terms of absolute job vacancies to be filled, and reflects a high rate of employment currently in this category.) Of the three counties, however, only Colleton has a percentage increase which is lower than the average increase for all occupations as a whole.

At the other extreme, the occupational category which shows the smallest additional need for the two-year period in the Three County Area is the Institutional Domestic and Health Occupation group which includes such occupations as butcher, dry cleaner, janitor, nurse, dietitian, etc. The total additional two-year need for all occupations in this area (as determined by the survey sample) is 2,019, while for this particular category the total need is only 73 (Colleton = 18, Dorchester = 23, Hampton = 32), a 75.3% increase over the present jobs in this category. The State need in this occupation group is projected to be 4,543, while the need for all occupational vacancies is expected to be 74,315. The percentage increase of employment needs for this job category in the Three County Area over the two-year period is 75.3%, compared to a total percentage increase for all occupations of 83.0%. This is in contrast to 44.4% and 49.1% respectively for the State totals.

Although the Institutional Domestic and Health Occupation category is last in terms of absolute job vacancies for the Three County Area, it is only next to the last in the State figures where the category of Heavy Male Workers (contract construction, laborer, etc.) shows the smallest need for additional workers with a total of 3,542, a 64.1% increase over the present employment level. Interestingly enough, this category ranks second highest in the Three County Area, which shows a total need of 372 (of which Colleton includes 56, Dorchester 41, and Hampton 275 -- this latter figure obviously has a pronounced effect upon the total), although the percentage increase of 71.3% is less than that of the overall average increase.

The occupational category with the second highest number of projected job vacancies for the State is that of Female Factory Operators with a total of 15,797. While the same category ranks only fifth in the Three County Area with 220 vacancies (Colleton = 188, Dorchester = 24, Hampton = 8). A significant point is that in every instance the percentage increase over present jobs in this occupation group is considerably higher than for all occupations as a whole, and in fact is the highest increase in all five areas being considered (each county, Three County Area, and State) with the three-county increase being 135% and the State increase 75.4%.

The remaining three occupational groupings under consideration include Clerical, Supervisory and Government (three-county projected need = 223; State = 10,138); Sales, Retail and Wholesale Trade, Finance, Insurance, and Real Estate (three-county need = 343; State = 8,288); and Skilled Trades and Maintenance-Repair (three-county need = 207; State = 13,591). These categories are included in the middle range of the grouping and show little or few clear characteristics.

In terms of absolute vacancies to be filled, Clerical, Supervisory, and Government figures rank fourth in both three-county and State totals and consistently show percentage increases of expected needs over present positions which are less than overall, average increases (65.8% and 47.4% respectively).

Sales, Retail and Wholesale Trade, Finance, Insurance, and Real Estate ranks third in terms of absolute need for the Three County Area and fifth for the State. However, in terms of percentage increase, all categories again show figures which are lower for this individual category than for all occupations as a whole with the three-county increase being 76.9% and that for the State being 40.9%.

The number of job vacancies to be filled for the State places the category of Skilled Trades and Maintenance-Repair third in ranking while it is only sixth in the Three County Area. The quite high percentage increases for both the State (64.3%) and Three County Area (92.8%) indicate increasingly high needs for employees in this area. Skilled Trades generally require more than two years of preparation and point up a considerable need.

INTERPRETATION OF TRAINING NEEDS

As indicated previously, a job vacancy report such as that from which this report was compiled does not necessarily constitute a training need report. Various job openings are not always filled by employees who have just completed a course of specific training for a particular job. Frequently they may be filled by transfers possibly from other lower level jobs which may or may not create job openings at these lower levels; or, possibly from other plants of the same employer. Skilled tradesmen in particular may be brought in from other locations. An additional alternative of employers is to meet labor shortages by means of automation or mechanization, which would, in fact, lead to having fewer, rather than more, workers per unit of output. Finally, certain firms might tend to create a discrepancy intentionally or unintentionally in terms of reported labor demand. It should be noted, however, that a survey of openings expected by employers in the near future may be the only data available, and that this type of survey could point the direction of openings better than the absolute number of openings. Also this would highlight the type of training needed better than the usual school determination, so often based on only past demand or existing educational plant.

In summary, as shown by the table presented below, employment needs, and therefore the need for training facilities, are increasing in the Three County Area considerably more rapidly than in the State as a whole. Dorchester County has a slightly higher percentage increase of employment compared to the State as a whole (50.2% vs. 49.1%), while Colleton at 110% and Hampton at 81.3% are considerably above the State average, with absolute job vacancies ranked in the same order.

Table 64 -- NEAR-TERM EMPLOYMENT SAMPLE

	Colleton	Dorchester	Hampton	3-County	S.C.
Employment Feb. 1967	854	652	926	2,432	151,345
Total Projected 2-Year Need	939	327	753	2,019	74,315
% Change Of Employment	110.0	50.2	81.3	83.0	49.1

Statistics compiled in the Three County Area appear to indicate a need for training in all of the various occupational groupings rather than showing a definite hierarchical pattern as some might expect, with the only possible exception being a fairly large increase in demand for Factory Male Operators and a fairly small increase in the Institutional Domestic and Health Occupation category. Also, the figure for the Heavy Male Occupation and Laborer category for the Three County Area is somewhat distorted by the rather large number of laborers in Hampton County which creates a considerable contrast when compared with the State figures, where this as well as the Institutional Domestic and Health Occupation category are the only two groups whose rather low employment need totals differ significantly with average State figures.

Although the failure of this survey to show a clearly identified need for a particular type of job training was unexpected, the across-the-board need for a large number and percentage increase of workers in all categories is a good sign and points up the need for additional manpower development training to increase employment in the near future. An appreciable amount of this training will be offered by employers if its is not offered by public education and adult education programs. Candidates for such job training, however, have already been reported in short supply in the Three County Area, largely because of high prevailing rates of functional illiteracy. While there may be only limited justification for literacy requirements in many of the job vacancies suggested for the near-term,standard employment practice throughout the United States uses educational attainment as the most important evidence of desirable productivity and will only employ and train applicants without basic education as a last resort. Since the average employee changes jobs and must be retrained at regular unplanned intervals, the employer finds careful selection more economical. The best industrial lure an area such as the Three County Area can offer is a well educated and willing workforce. As has been repeatedly demonstrated in the wave of expansion since World War II,branch plants and relocations are placed after evaluation of total "industrial climate",one important aspect of which is general educational attainment in an area. Educational programs will continue to be an important part of industrialization efforts.

One final note of caution should be sounded in interpreting this survey. Only a sample of employers, mainly those in touch with the Employment Service, was tabulated. Many workers in the Three County Area, as is true throughout the State, were not covered so that the Sample Employment reported for 1967 does not represent all employment. The employees who were covered represent a good sample, perhaps larger than any ever used in this fashion, but the intent is to show near-term job openings not to totalize employment. Any conclusions regarding total current or future employment should be reached with caution, and require additional data. Other cautions already listed should also be kept in mind.

PROGRAM OF MANPOWER DEVELOPMENT RECOMMENDED

In an area with the problems of the Three County Area and the limiting factors, it is impractical to recommend specific manpower training courses for unspecified incoming industries. Rather, the Special Schools program approach, the first of which was set up in the Three County Area during the early stages of this project, and five of which are now underway, is the best solution and is our major recommendation as the backbone of the manpower development program. As soon as an employer has selected a site his training needs are established and a Special School is set up for him by the staff of the Technical Education Committee. Industrial Relations assistance is offered, prospective employees are recruited and trained, and every assistance in locating is offered. All of these services are described to a prospective employer thinking about locating in the State of South Carolina. Because these services are available any place in the State, the employer does not have to survey in advance the availability of people with the needed skills, but can depend on past experience to prove South Carolina workers highly trainable.

Fight Illiteracy!

In addition to this major manpower development program all other steps should be taken to encourage residents of the Three County Area to educate themselves, and to provide the means of doing so. Whenever opportunity offers under the STEP program or some successor providing basic education emerges, all functional illiterates should be recruited to attend programs. A center should be located at Walterboro. The community should seek out training locations in the more rural areas and should use the best educators available for the training. Modern teaching aids and a linguistic approach will be required for best success, but local schools have shown traditional methods work.

At the education-in-school level the local schools should be brought to a peak, budgets should be increased as is made possible by a growing personal income in the area, and both vocational education and adult education expanded as a community benefit activity. It is possible that much of the professional agriculture training being given by local schools needs to be rethought and shifted towards agribusiness pursuits in line with the rapidly changing labor market. The School Boards and professional educators should be given the specific task of making the community more attractive to incoming industry. Elected officials must be enrolled in this effort. When an Area Vocational School becomes possible it should first be set up to bring in students from other communities as well as from the community where it is located. If the aim is to bring vocational training to the student where he lives while leaving him in his regular school for academic studies, then such a school can be obtained earlier, perhaps next year, by combining the efforts of several counties. Inasmuch as Walterboro is the central location it should solicit the cooperation of the other School Boards in arranging to bring in students to an Area Vocational School in cooperation with the State Superintendent of Education. The counties served, all of which also want vocational education, might be willing to merge efforts for an earlier result. Some public school bus arrangement must also be set up for transporting students to the TEC Centers for special instruction. Regular school buses operated after school hours on the regular student-drivers basis could make the TEC evening program available to many Three County Area workers. Since the skill acquired by the student will help attract industry to the community, this is a legitimate concern of the local Industrial Development Board as well as the

School Board.

JUNIOR COLLEGE AT WALTERBORO

Finally, at the top education level in manpower development the Three County Area needs some provision for training at the college level. The driving distances to existing colleges average over forty miles for most. Except for lower Dorchester County these distances may be too great to persuade prospective employers that education at higher levels would be available to the employees they might wish to transfer in, or as a persuasion-point in recruiting technical help. In addition, a developing industrial economy requires employees with at least some college training for many of its technical, administrative and supervisory positions. If these are to come from the local community local college training is needed.

The educational needs represented by college entrance for the next decade in South Carolina are growing. Based on the projections made from births 1949 to 1959, modified by First Grade Enrollment and High School Graduation experience in the meantime, South Carolina can expect the number entering college in 1966 in South Carolina (10,383) to grow to 14,800 by 1977. This projection takes into account the migration rates and general population growth projected by the U. S. Bureau of Census in Current Population Reports, Series P-25, No. 326 using the Series II-D which seemed most compatible with recent South Carolina experience. The State Superintendent of Education has made projections which agree with this total, but has not published these results as yet. These projections, therefore, must be considered our own.

This 43% increase can be handled by increasing existing State Colleges and Universities but is more economically handled by a series of local Two-year branches. The Three County Area branch could well be located at Walterboro for the same reasons which have been stated in marking this as the "growth center" for business development. The balance point of the Five County Unit might be closer to Ridgeville in Jasper County, but the rapid development of Baptist College in lower Dorchester County is counterbalanced by potential growth in new higher educational facilities at Beaufort, to leave Walterboro a highly desirable location which has no college. Local interests should locate temporary teaching space in which to get started and petition for the building of a University Extension Center or Junior College in the near future. Hampton County participates at the Allendale U.S.C. Center.

EVALUATION UPDATING NOTES

During the process of readying this report for publication several changes have occurred in the general area of technical education. Where judged significant, irrelevant material has been deleted, and the authorized Orangeburg TEC Center has been written in. In addition, J. D. Little, Jr. has replaced Walter Harper as Director of the State Development Board which has had its coordinating function among certain State Commissions, Boards, and functions broadened.

In the office of the State Superintendent of Education Cyril B. Busbee has been elected to replace Jesse T. Anderson. The important contributions of the S. C. State Committee for Technical Education to manpower development for suitable commercial and industrial opportunities are expected to continue and expand as closer coordination is developed among agencies and thus to benefit the Three County Area along with the rest of the State.

A new Economic Opportunity Board has incorporated and under the designation T-Square (Training for Tomorrow) has submitted a project through the Economic Development Administration to take responsibility for basic education of adults and school drop-outs with the intention of directing its graduates to further vocational training in other programs. The T-Square program also envisions health and physical condition improvement as a part of occupational training. When active this program intends to project manpower development programs for the Three County Area from a Charleston Prime Center with satellite Centers in each of the counties.

In their approach to the placement in productive jobs of people with low educational attainment, agencies in South Carolina have now made use of a wide variety of modern teaching methods including audio-visual aids, programmed learning, tape teaching, basic-reading techniques, and Educational Television. One OEO Community Action Project in Laurens County, an area similar to the Three County Area economically, is employing the MIND, Inc. (Methods of Intellectual Development) basic education program developed by the National Association of Manufacturers under sponsorship of the County Planning and Development Board with apparent good results. Of special note in this pilot program are the evident changed attitudes on the part of the students (a highly selected 20% of those applying for training) and the ready acceptance of graduates by employers of the community who have participated in the program from the start. One phase of this program raises the educational level of those already employed and enrolled off-shift at the behest of their employers to qualify for upgrading on the job. Such a CAP's program might well be sponsored by a Three County Development Board pending the arrival of a T-Square center. Success might be the most convincing argument for reluctantto-change school people. All education must use the available methods, which, under the CAMPS (Cooperative Area Manpower Planning System) designation is preparing to exchange future plans. The participating agencies are:

Bureau of Apprenticeship and Training

Bureau of Work Programs

South Carolina Department of Education
    State Superintendent's Office
    Division of Vocational Education
    Division of Adult Education

State Committee for Technical Education

State Office of Economic Opportunity

South Carolina Department of Public Welfare

Department of Housing and Urban Development

South Carolina Employment Security Commission

State Department of Vocational Rehabilitation

Project T-Square, Consulting Agency

Economic Development Administration,

Many of the people expected to be active in the CAMPS effort were on the list of helpful educators planned for this report, so the remainder of the active committee have been incorporated in that listing.

PART FOUR: IMPEDIMENTS TO GROWTH

The outline of this technical assistance project makes plain that lack of education and manpower development is considered the chief impediment to economic growth in the Three County Area, but that other impediments are to be identified. Manpower development is a problem, but the possible solution is given in the evaluation of programs and in the human resources treatment in sufficient detail to justify a pass-by here. Other impediments were sought in many ways.

As a part of this project many contacts were made in the field. Interviews with local leaders were supplemented by customer visits, discussions with industrialists newly moved to the area, and correspondence. Trips were made to out-of-state companies being sought for relocation within the State both "cold" and as part of planned assistance in "industry hunting." Many questions were asked of local residents about industrialization. Extensive discussions were held with professional industrial development specialists and economists. A large body of information obtained from respondents in the Three County Area are summarized in Table 65. For convenience of presentation this information is offered as formal queries and replies by specific categories of respondent although the questions were not asked in this form and the answers represent consolidation by concept rather than exact wording. The numbers represent the percent of the respondent category providing information thus consolidated. The number of people in each category differs and percentage answers are used to make comparison possible. Although representative of the Three County Area there are different numbers from each county. No statistical sample was attempted and some data was discarded as useless. Some re-

TABLE 65 — SHOWING CONSOLIDATED RESPONSE TO FIELD SURVEY IN THREE COUNTY AREA BY TOPIC AND RESPONDENT CLASS

	Query and Reply	Industrial Developers	Bank & Finance	Retail & Service	Present Industry	Total Group
I.	In what ways would a new industry help your area? (Reply in percent of group)					
1.	Stop deterioration; slow rural blight; aid recovery for former farm-market center.	23	0	3	13	13
2.	Increase local tax base to provide improvements needed.	66	40	0	0	30
3.	Expand local business; open new services needed; give local people more to spend; new customers.	32	20	55	26	57
4.	Employ the unemployed; fight poverty.	18	0	3	0	9
5.	Attract financing for present weak businesses when needed.	0	20	0	13	4
6.	Wouldn't, but might spoil area and cause trouble.	0	40	6	26	11
7.	Wouldn't, but might raise wages and cause failure of marginal business.	5	0	6	50	13
8.	Wouldn't, but bring undesired unionism	0	0	0	26	4
II.	What are major advantages in this area for new industry?					
1.	Good town; fine climate, hunting, fishing; comfortable relaxed life.	86	20	24	0	54
2.	Plentiful plant sites; open land available.	91	40	3	0	43
3.	Strong, willing, trainable workforce at competitive wages.	96	80	47	26	83

SHOWING CONSOLIDATED RESPONSE TO FIELD SURVEY IN THREE COUNTY AREA
(Table 65 - Cont.)

	Query and Reply	Industrial Developers	Bank & Finance	Retail & Service	Present Industry	Total Group
4.	Plentiful pure water available in area.	96	80	40	13	72
5.	Good transportation to close-by big city.	46	40	18	50	43
6.	Favorable terms, taxes, on local sites; free land offered.	27	100	0	0	20
7.	Financial aid; helpful financing; bank co-operation in seeking loans.	18	100	0	0	17
8.	Good local education; vocational nearby; technical training soon.	50	20	6	0	26
III.	Are people available to work at new jobs?					
1.	Yes, and if inexperienced are easily trained.	96	60	32	26	70
2.	Few right here, but some within driving distance.	18	0	13	0	17
3.	Depends on industry and wage scales.	0	20	0	26	6
4.	No; skilled and supervisory labor shortage; some won't travel; unemployed lazy.	14	0	11	75	24
IV.	Do you foresee any local problems with new industry?					
1.	School expansion required; need more vocational education.	9	20	0	0	6
2.	Site lacks drainage, water; utilities; costs to be absorbed.	27	0	0	0	11
3.	New employees require assimilation; upset.	18	0	0	13	9

SHOWING CONSOLIDATED RESPONSE TO FIELD SURVEY IN THREE COUNTY AREA
(Table 65 - Cont.)

	Query and Reply	Industrial Developers	Bank & Finance	Retail & Service	Present Industry	Total Group
4.	Newcomers may produce political unbalance; political shift of power underway.	9	0	0	0	4
5.	Fire protection needs expansion.	9	0	6	0	7
V.	What are major impediments to a new local industry?					
1.	Low tax base; limited local financing for low-cost sites.	14	20	0	0	7
2.	Many poorly educated for industry; need technical education, vocational training.	41	0	0	100	32
3.	Present businessmen resist innovation; fear labor shortage, unions, strangers.	27	20	0	0	13
4.	Old guard resistance to change; complacent satisfaction with present.	32	0	8	50	26
5.	Construction slow and expensive locally.	9	0	0	0	4
6.	Isolation; State Highway Department won't build needed road; limited market draw.	9	0	8	0	9
7.	Sites over-priced; held by developers; unsuited for some industry.	9	20	3	26	11
8.	Sites deficient in facilities; drainage problems, foundations, utilities.	23	80	0	50	24

spondents were talking about a site, some about a town, some about a county, some the area, and a few about South Carolina or the South as a whole. Since no questionnaire was used, it is possible that researcher opinion may have colored the recording of some responses. Some local residents qualify for multiple categories, but are reported in only one. Almost every respondent gave some conflicting replies and some were much more expansive on certain topics than on others. A few made more than one reply to a question and some changed their minds during an interview, expressed themselves differently upon better acquaintance, or interpreted the questions differently at different times. All of these considerations make any extensive analysis of this table inappropriate especially as a cross-comparison between categories.

SIGNIFICANCE OF LISTED TOPICS

These replies show in general that most of the leaders in the Three County Area believe that industrialization is a good thing; that new industry will raise the local tax base, improve local business, and slow-down anticipated decline or facilitate community growth. They see their labor force as their main local advantage feeling that wage rates are competitive and that these workers although inexperienced and poorly educated are easily trainable and productive. Although there are localized shortages of skilled workers and a chronic lack of trained supervisors it is reported that no industry has experienced great difficulty in finding people, whenever that industry has been willing to relax hiring standards and perhaps raise wages slightly. Some local problems are anticipated especially the need for expanding schools and utilities for the sake of the new plants before tax benefits are experienced, but this is mainly a matter of timing.

The major impediments recognized by local leaders, in addition to needed education for the general work force, is technical training and vocational education closer to the workplace. This is especially true of Colleton County which has the town of Walterboro as the growth center for the whole Three County Area. Most of the work force of Dorchester County is close enough to the Charleston centers to obtain any training needed. The northwestern portion of Dorchester County has an attraction, as does the upland of Colleton County towards Orangeburg centers. Hampton County is about equally attracted to technical training offerings in Orangeburg and at Allendale although Allendale is considerably closer.

The additional impediment of limited local financing available has been somewhat tempered by the willingness of local bankers to cooperate with new plant financing through a variety of sources. It is anticipated that new state laws will be passed in South Carolina making it possible to use County Revenue Bonds to finance industrial development as is provided in many other Southern states. There have been plants which located elsewhere after considering the Three County Area because of this type of financing.

LOCAL OPINION A BARRIER?

In a local community it is always the other fellow who is holding back progress by clinging to old ways too tenaciously and who is asking too high a price for his property. There is no way of evaluating the importance of such supposed obstructionism. When these points are grouped with ineffective local construction firms, recognized isolation, and the inadequacy of certain sites offered, a real barrier may exist. At least it does in the minds of these people and their very belief in impediments may be the greatest barrier to the success of their search for new industry.

Of greatest importance as a barrier, however, is the sometimes veiled suggestion that effective industrialization is being blocked by those few managers already using the labor market. Because they fear the effects of a new industry, hypothecated as a shortage of new workers, rising wage rates, and excessive demands from present employees, they are accused of actions which sabotage industry-seeking efforts. Such action might take the form of pretending to cooperate in the search, but then giving the visiting site-reviewers a poor impression of the location. There is evidence that this damage-doing is based on misunderstanding and may even be unconscious and unintentional. Otherwise the search is directed by political leaders and small business men but resisted by those heading the larger, older industrial plants. The charge is a serious one, since all industrial development people know that the best salesman for a given location is the businessman who has recently moved there. Prospective clients are regularly introduced to satisfied customers. If such a man is trying to retain his "early-comer" advantage, he can be effective in delaying further growth. Comparison shopping methods seem indicated.

Industry already in an area has rights, interests, and privileges. Certainly no manager can be asked to invite in new industry which in the long run will go against the interests of his stockholders. No one should be asked to accept a bad neighbor.

A check back to the parent corporation of the most flagrant example of such obstruction of community action was made to help the community and this elicited a statement that such action was dishonest and against company policy. What action the corporation will take in this matter is unknown, but the discussion ended with the expressed opinion that enlarging the local plant could easily replace the lost industry. Not enough detail was given in any other charge to justify investigation. Our study could not completely evaluate all of the impediments suggested, nor could ready solutions to the difficulty be suggested. Rather we asked "What are you doing about it?" Sometimes this was the first consideration of corrective steps, but in general we found that local leaders were taking steps to overcome impediments which they recognized. What may be required as technical assistance then is a new look at the situation, and this we tried to provide. Ideas and suggestions were not held back for a report, however, but were given as soon as developed to the Three County Area leaders most apt to take action. A few are reviewed here. None of the following mentioned impediments, then, should be surprising. Some action is underway to overcome most of them. In those cases where little has been done it is largely a matter of timely allocation of scarce resources.

ATTITUDE, GEOGRAPHY, BALANCED ECONOMY

Topics to be considered here can be grouped in three assemblages of problems having a closely related nature, although of course all impediments are inter-related. These are attitude, geography, and balanced economy. The term "attitude" is not intended in any derogatory sense, but covers a natural resistance to change including a lack of interest in what may be called an industrial economy, an excessive expected loyalty to a small neighborhood, town, county or area, and a chronic non-cooperative reaction to "outsiders" even when those coming in have the purpose of benefiting the local community as well as larger State and National economies. Geography is concerned mainly with the extensive inland and coastal swamp areas found in the Three County Area and with the problems of transportation, drainage, and stability of water-level which these low-lying areas generate. Balanced economy refers to the need for not only new industrial plants, but for agri-business approaches to employment of displaced farm workers, and the generation of trade and service activities, including tourism, if the best possible development of this segment of the State of South Carolina is to be achieved. Those interested in the industrial development of the Three County Area will want to overcome all three of these groups of impediments, and indeed all impediments stated and implied.

Excessive local loyalty is an expected part of the American setting and becomes a disadvantage only as an excess of community spirit causes resistance to all outsiders so strong as to drive away needed customers, cause expensive duplication of services that could be shared by neighboring communities, and in the words of a Three County Area native causes local residents to "throw rocks at site-seekers visiting the area."

The governmental structure and practice of the 46 counties in South Carolina has contributed to this local autonomy and legislative redistricting ordered by the Federal Court has been a disrupting influence. Over the years there has developed in South Carolina a very close relationship between State and county government. The counties have been run by their Legislative Delegations each made up of one of the 46 State Senators elected one from each county and the Representatives from the county apportioned by population. The counties have obtained their chief revenue from distributions of State surpluses back to the county, colloquially called "kickbacks." Although in truth these moneys are not state excess money but local property taxes collected by the State for the county (See Paul Alyea, "The Role of the State of South Carolina in the Taxation of Property," Bureau of Governmental Research and Service, USC, 1965) South Carolina has balanced Executive and Legislative powers in such a way that the Legislature has been very powerful. Some have referred to South Carolina as legislative dominated, and certainly the Legislative Delegations ran their own counties. Population changes resulted in an ordered reapportionment of the State Senate and the Three County Area was joined with Jasper County to be a two-Senator district. This meant that two former Senators from these counties would be displaced in both legislative operations and county government. This plan was permitted to be operational for two years and will probably be replaced in 1968 by a 46 Senator plan. This will join Beaufort County which had its own Senator to Colleton, Hampton, and Jasper Counties in a two-Senator district, and move Dorchester County to a new two-Senator district along with the counties of Calhoun and Orangeburg. Inasmuch as the several State Senators have been very effective "industrial development salesmen" for their own counties, this disruption of established practice has upset some industry location efforts. The existence of the multiple-county-districts, however, emphasizes the point being made here that there must be greater cooperation in industrialization efforts.

WALTERBORO THE GROWTH CENTER

If the Three County Area has a natural growth center, it is Walterboro in Colleton County, and when the other two counties are added the centrality is strengthened. A competitive growth center is developing at Ridgeland in Jasper County, but this is too far away from Dorchester County and the main upstate highway, Interstate 26, to compete effectively at this point.

In order to strengthen the growth potential of Walterboro, which also has in its industrial park a strong asset, efforts should be made to cause workers throughout the Three County Area to look towards Walterboro as an employment center. Much of the present flow is from Walterboro to work in North Charleston (mainly the Navy Yards) and to or through Hampton to the Savannah River Atomic Plant but this flow can be reversed by recruiting for new Walterboro jobs at the extremes. A contribution to the Walterboro centrality would be strengthening the attraction of the town's stores for its hinterland. The local Chamber of Commerce has already arranged Walterboro Sales Days, but these should be expanded, with perhaps extra discounts for shoppers proving distant residence by way of a "gasoline money refund" in the form of drafts on local filling stations. Of equal importance with the actual sales traffic generated is the change in attitude which makes Three County Area shoppers "think Walterboro" and realize "it's not too far away to work." Various Fairs, Festivals, and Carnivals also have this value of making those who come for entertainment return for employment. A special opportunity for an Industrial Fair is offered by the Colleton County Industrial Area where plant visitations could be combined with Drag Strip racing, a private plane fly-in, and industrial exhibits from the whole coastal area. Not only would the labor-force market be strengthened, but general attitude would be improved. Among the unidentified visitors might well be unannounced site seekers from companies considering building plants. Because the cooperation of many South Carolina people more loyal to other local areas than to Colleton County or to Walterboro is essential a change of name for at least a section of the present Industrial Area might be made, perhaps to "Coastal Plains Industrial Area" or to something indicating "Midway between Charleston and Savannah" or "Florence and Savannah off Interstate 95" or "Midpoint between Wilmington and Jacksonville."

PULLING IN TOURISTS AND WORKERS

Some effort has been made to divert tourist traffic at Georgetown along 17-A to pass through Walterboro, and more such effort is needed especially to get travelers habituated to Walterboro while Interstate 95 is being completed. When this route is operating, the problem will be diversion, but that is in the future. A similar sign and tourist attraction effort needs to be made along all major roads to get not only travelers, but even local drivers aware that "this road goes to Walterboro." Special attention should be given to U. S. 17 west of Charleston,U. S. 15 from Sumter, and especially as an exit west from Interstate 26, a U. S. 301 and 601 point at Orangeburg which touts U. S. 21, U. S. 321 and U. S. 301 and U. S. 601 west of State 64 and all main tourist routes east of Savannah, Georgia. Such promotion is aimed both towards tourists and towards identifying Walterboro as a growth center.

The foregoing has been emphasizing the growth of the Three County Area around its growth center at Walterboro, but just as it has been emphasized that too much interest dare not be taken in one small town at the expense of the whole Three County Area, this area can prosper best as a part of its larger region. Many of the problems of excessive illiteracy, declining agriculture and lack of an industrial base are problems of the whole region and must be solved regionally. For this reason we originally proposed that these three counties be included in a poverty study group of multi-county Carolina Coast Counties, then in an Atlantic Flatwoods area, and ultimately cooperated in setting up the request for establishing the Coastal Plains Study Commission covering portions of Georgia, South Carolina, and North Carolina. It would now seem that the work of this Commission will be of great benefit to the Three County Area. Cooperation in multi-county, multi-state economic development efforts should do much to overcome any remaining reluctance.

WHAT GOOD IS A SWAMP? A STATE PROBLEM

The geography of any area is relatively permanent, but that aspect of physical geography represented by the swamps presents impediments which can be overcome. In considering the swamp areas, both inland and coastal, conservation interests should not be forgotten, but swamps presently do constitute a barrier to transportation. In many cases roads twist and turn following high ground, and interconnections are poor. These make poor truck routes. Straightening is blocked by swamps. Swamps also in many cases block rapid drainage of even normal rainfall, let alone industrial waste. Because they are very shallow reservoirs, easily dried up in prolonged dry spells, swamps do not serve, as do lakes and man-made reservoirs, as good regulators of steady surface water supply. Most of the Area is underlain by a good water supply independent of the surface condition. These underground rivers could supply most water needs, but surface water is usually so plentiful that provision is not made for drought. Swamp recovery is too complex a subject to be investigated in this study, but is worth region-wide study.

Recreation and Business

Inland swamp fill and drainage will probably be economical only for road building or to enlarge an existing "high ground" area, but the emphasis should be on improving drainage and on building a few enlarged versions of "farm ponds." These artificial lakes would provide needed rural recreation and reservoir storm water for steady year round stream flow. Since the small amount of dissolved oxygen in swamp water makes it less effective than a running stream for sewage dilution and purification, ways should be found to increase oxygen content and this might improve the miasma of the swamps.

The coastal swamps are a different matter. Salt swamp makes the coast area of Colleton County difficult to approach and has prevented industrial use of sites there. Backwater and river swamps block off Hampton County from the Savannah River sites which could easily become industrial chemical plant locations reachable by barge. In addition to deepening channels here to improve access the removed material could be used to build sites for roads, tank farms, and nearby recreation areas. The engineering feasibility of the methods need to be proven in these locations but techniques of moving underwater mud by vibration, by sonic pumps, by air lifts as well as by customary water-slurry pumping have been demonstrated elsewhere, as have portable dams of inflatable neopreaned-nylon tubes for holding back solids while the water drains. Not all mud removed from the swamp can be used as land-fill. Some has the same defect as harbor dredging spoil, which, because of the flocculation of fresh-water-silt when it reaches salt water forms a spoil that does not dry, but only crusts over, much like quicksand. Research attention should be given to mechanical, chemical, biological approaches and admixture with such materials as sand, marl, fly-ash, exploded clay pellets and other substances to discover a method of using such material as fill. Such experimental investigations which combine civil and marine engineering, a variety of sciences, and economics are beyond the means of a single area, but since the results will benefit many areas these experiments are a proper state function. Experiments with new engineering techniques in the Three County Area could be used as pilot projects for the whole state.

A BALANCED ECONOMY NEEDED

The agricultural economy now rapidly dying out in the Three County Area required one kind of supporting operations from trade and service industries. The new agri-business pattern developing requires a different complex. The industrialized economy sought after requires a still different mix. The Three County Area needs industry to use its natural and human resources most productively. In seeking industry, however, a balanced economy must be the aim, and the wholesale trade, retail trade, contract construction, utilities, and service industries must also be fostered. The review of the labor force composition for these three counties reported elsewhere in this study clearly indicates the deficiencies in certain locations. The differences among counties represent opportunity, and, as industrial wage workers come into the economy, aids must be provided for these other employments. The chief aid needed is financing and managerial guidance to expand existing non-agricultural, non-manufacturing, industry as well as to start new businesses. Cooperation must be encouraged with the Small Business Administration, with the State authorized small business loan agency, and with the community action plans of the Office of Economic Opportunity as well as local banks. Some state legislation may also be required. The establishment of cooperatives among consumers perhaps as an offshoot of the Technical Education Centers would help. Table 66 shows the small number of cooperatives now active in the agricultural economy of the Three County Area. Cooperatives are not a perfect answer, but are one way to start needed services.

NEEDED: A BUSINESS EQUIVALENT TO THE COUNTY AGENT

Service Centers supplying business services to Non-agricultural enterprises equivalent to the service supplied farmers by the County Agricultural Agents seem also indicated. These might well be related to the other state colleges as County Agents are related to the agricultural colleges. Naturally services would cover all of the 46 counties and would benefit the Three County Area along with others under the state plan. Some aspects of county service are now provided to the several communities from the Technical Services Office of the State Planner. Some services are provided in attaining balance through the Legislative Delegations of each County and Senatorial District. What is required is further effort on the part of everyone.

Table 66 -- COOPERATIVE ASSOCIATIONS IN THE THREE COUNTY AREA

1963

Name	Address	Principal Service Rendered
COLLETON COUNTY		
Coastal Electric Cooperative, Inc.	Walterboro	Electric service
Colleton Marketing Authority	Walterboro	Marketing truck crops
FCX Cooperative Exchange, Inc.	Walterboro & Smoaks	Purchasing farm supplies
Palmetto Rural Telephone Cooperative, Inc.	Walterboro	Telephone service
Federal Land Bank Association of Walterboro	Walterboro	Farm loans
Walterboro Production Credit Association *	Walterboro	Production loans
DORCHESTER COUNTY		
Coastal Milk Producers' Assn.	Summerville	Bargaining
Dorchester Marketing Assn.	St. George	Marketing hogs
Dorchester Coop. Breeding Assn.	St. George	Insemination
Branch Office of Walterboro Production Credit Association *	St. George	Production loans
HAMPTON COUNTY		
Branch Office of Walterboro Production Credit Association *	Hampton	Production loans
* Author's Note: Now organizing as Coastal Credit Association	Coast Area	General Coop. loans

SOURCE: Farmers' Cooperatives in South Carolina, South Carolina Agricultural Experiment Station, Clemson University, Clemson, South Carolina, July 1965

PART FIVE: RECOMMENDATIONS

Throughout this write-up suggestions have been made for improving the Three County Area economic picture. The encouragement of utilization of manpower development activities and the removal of impediments identified are underway as are many of the approximately 75 specific suggestions made in the field and mentioned frequently in the foregoing report.

The first and most direct action to be taken by those interested in local development in the Three County Area is to specialize industrial recruitment on those industries shown to be most compatible with the resources of the area. Some 42 different industries are mentioned with some degree of favorableness. There was a backward linkage identified in each county which would aid in luring Glass Fiber Fabric users to Colleton County, Cement users to Dorchester, and Wood furniture, cabinets, and fabricated millwork activities to Hampton. The most strongly recommended industries for this area were Wood Products, Apparel, and Agribusiness activities. A variety of wood products including different kinds of furniture, wood cabinets, fabricated millwork, and pre-finished wood floor blocks seem compatible to the area. Apparel plants are recommended for the more rural areas, and as a diversification utilizing secondary labor in Hampton County.

Agricultural Economics and Food

While Agricultural Economics is not the assigned field, recommendations are made for improved communications or management education for farm operators and managers as well as for specific Agribusiness industrialization. A feedlot and related Meat packing is recommended for the town of Dorchester. An experimental pilot plant for freezing vegetables is recommended for Yemassee. The growing and packing of condiments and aromatic seeds is recommended as a self-help industry generally. The exploitation of the variety of consumer products to be derived from soybeans, especially the oil-chemical and industrial products, is suggested.

Compatible Industries

A group of industries selected for specific attention from among the over 180 SIC Code industries explored by applying location factors, divining growth trends, and identifying the national pattern, include Farm machinery assembly, Electrical machinery, especially Radio and Television transmission equipment and components, Fabricated rubber products, Toys and sporting goods, Costume and other Jewelry. Attention is called to the flight from large cities of industries traditionally located there. Among those seeking cheap and secondary labor for labor intensive activities a dozen are named for local enticement in terms of the resources of the Three County Area.

Subject to needed development of barge docking facilities the Chemical industry is evaluated for sites in Hampton County at Stokes Bluff on the Savannah River and in Colleton County at Jacksonboro on the Edisto River and Route 17, and through the development of St. Helena Sound. This last leads into possibilities dealing with tourism and oceanography just as the existence of the Savannah River Plant invited atomic industries to be located in relation to it. All of these water-front sites on fresh water flows, but with barge transportation on the intercoastal waterway potentially available, call attention to the Pulp paper, and paper products industry for solicitation along with Rayon, acetate and other cellulosic fiber manufacturers.

Developing Industrial Parks

While local sites may prove attractive to some employers the development of industrial parks within the Three County Area, such as the Colleton County Industrial Area, may make it easier to provide the technical features demanded by industrial site evaluators. In Colleton County the best area is already under development, although promotors may be neglecting one of its chief advantages as an Industrial Air-Park. A name change indicating its broader functional attraction was recommended. In Dorchester County a park-site is spotted near the intersections of Interstate Routes 95 and 26 which has an excellent development potential. In Hampton County the former lumber-mill location at Miley is the favored industrial park site.

The obvious recommendation is to exploit these opportunities for industrial development. A similar recommendation is made to cooperate fully with the regional development commission and State agencies. Next to be reviewed are over seventy-five performances and cooperative changes to benefit the State of South Carolina, the Three County Area, and especially the people of Colleton, Dorchester, and Hampton Counties. Some of these changes will have a mitigative effect on the projected slow population and work force growth otherwise estimated for the Three County Area by increasing the potential for light industry attraction.

THREE COUNTY COOPERATION IN REGIONAL ACTION

Very early in the reconnaisance of the Three County Area it became evident that these semi-rural counties were not able by themselves to solve the overwhelming problems created by an agricultural revolution. They wished to move into the mainstream of industrial America, but their move was hindered by many barriers. Zooming social change had been poorly accepted. Their tax base was too low to permit many desirable improvements. They had experienced steady population loss over recent decades, which came not only from rapid changes in agriculture but more recently as a result of commodity allocated acreages too small for profitable operation in a changing technology. They were depressed by the removal of a large air force training camp (whose 5,000 trainees outnumbered the largest permanent settlement), by the curtailment of Naval Base operations (which had given employment to many), and by the completion of the largest construction project ever built in the region. As if all this were not enough, lumber production in the area was greatly disrupted by new marketing practices. At the same time minimum wage requirements reduced saw-mill employment by 20% between 1954 and 1956 with continued reductions thereafter.

The fact that many solutions to the major problems were not within the purview of a single county was recognized in setting up the technical assistance project on a three-county basis. This was the first multi-county project in the State of South Carolina and one of the first in the nation. These three counties interchanged many ideas as well as commuting workers, and showed an unusual degree of cooperation among legislative delegations. Colleton, Dorchester, and Hampton Counties have cooperated in the past with the other two counties, Jasper and Beaufort, making up the South Carolina toe. They now plan participation with the other counties below the fall-line in the Coastal Plains Regional Development Commission program. This regional agency serves 159 counties in Georgia, North Carolina and South Carolina. An Economic District is also planned for the coast area of South Carolina. It is recommended that the three counties take whatever action is possible to join in all developmental programs made available through district and regional planning.

Some of the things which those interested in the counties of Colleton, Dorchester, and Hampton and their economic advancement through industrial development should consider whether their function is at the local, district unit, State, regional, or national level are brought together here in rough order of attention for considered review.

Section One: Actions for Localities

I. Walterboro Promotion as "Growth Center" No city within the Three County Area has enough population, nor provides enough services, to meet urban requirements as a "growth center," but Walterboro is a natural market center, located about 50 miles from the closest city which would qualify as a "growth center." An active program to promote a "Think Walterboro" campaign should be instituted in order to extend the market area, influence job commuters to come to this labor market, and divert a greater traffic flow toward this center. Activities to benefit from the completion of Interstate 95 should be started now, and residual parcels of land should be selectively considered as potential industrial sites at the exit and entrance points. Options should be obtained to protect this land. The extension of Walterboro City Limits to those access points, as well as to the Industrial Area for the purposes of zoning protection should be considered. Housing development may not be the "highest category" for zoning as it is usually considered, if it breaks up valuable industrial land.

II. Dorchester-North Charleston Promotion. To a very real extent the lower portion of this county is a part of greater Charleston and its economy is built on establishments, such as the Navy Yard, outside of its borders. Promotion for the area has been largely by contract with Charleston based groups. This is good and ways to make such cooperation in industrial development more effective must be sought. This Charleston oriented promotion, however, should not neglect St. George at the other end of the County nor overlook the political significance of districting Dorchester County with Orangeburg County in the recent Senatorial District reapportionment.

In addition there are certain actions all three groups should take at the County and local community level.

Section Two. General County Level

I. Develop Site Data. Each of the three counties has important industrial locations on which data appears to be incomplete, outdated, or generalized to the point of unattractiveness. Even the better site descriptions are poorly distributed. Abstracts of the more important information should be developed and widely distributed in cooperation with the State Development Board. An abstract of each site should be incorporated into the State data bank.

One of the sites about which the most complete information was collected was the Highway 303 location about three miles south of Walterboro originally considered for the Wool Scouring Plant. This would now be a good location for two or more small plants not interested in the Colleton County Industrial Area. It consists of two parts. The Race Track site containing 70 flat, open acres with an option for drainage, and the County Farm site of 60 acres across the highway. Both are served by the Atlantic Coastline Railroad.

There was more information concerning these sites available from such sources as the Atlantic Coast Line Railroad, the State Development Board, Colleton County Development Board and professional location companies operating in the area on a fee basis paid by either the site-seeker, the vendor-location, or both. Some of the site data presentations seen left something to be desired.

Other promising sites in the Three County Area had no data available, not even a photograph. Such presentations of data about possible sites should be prepared and updated regularly. It is more important to have pertinent facts available than it is to buy a slick printing job to present inadequate facts. Each large landowner and community in the Three County Area should arrange to have such information brought together. There were far too many possible sites in the Three County Area to even list, let alone investigate each one, but a few selected sites which seem most in need of a "selling job" are listed below for each of the three counties with mention of some of the features of each.

COLLETON COUNTY SITES:

1. Edisto River site near Jacksonboro which has the Atlantic Coast Line, barge traffic possible, and with U. S. 17 less than a half mile away, is closest to Charleston.
2. Combahee River site at Seaboard Railroad crossing for barge use.
3. St. Helena Sound site where intercoastal waterway traffic could be used on lower Combahee River. This could be made into a satisfactory secondary harbor if land transportation were improved.

4. Canadys site where proximity to power plant and Edisto River is tapped.

DORCHESTER COUNTY SITES:

1. Rosinville site, north, for highway benefits near two interstate routes.
2. Dorchester, town on the Southern Railway, for a possible feedlot.
3. St. George site, Route 15 and Southern Railway location for mechanical plant 15 miles from Branchville.

HAMPTON COUNTY SITES:

1. Large site at Miley where the Lightsey mills were located. Has water, branch railroad, utilities (and wood). This may be a prospective Hampton County Industrial Area with a future similar to the Colleton County Industrial Area.
2. Stokes Bluff Site on the Savannah River near Estill, S. C. In the extreme northwest section of Jasper County but particularly in Hampton County. Best non-fill 500-acre site with Seaboard Air Line Railroad, highway between Garnett, S. C. and Clyo, Ga., power line of South Carolina Electric and Gas Company. Important to tap barging traffic in Savannah with controlling depth of nine feet and about twenty miles above tidewater.
3. Hendrick site and O'Neal site as well as others in town of Estill, S. C.
4. Other sites at Brunson, Fairfax, and Yemassee on railroads.

a. The Brunson sites are: (1) One mile east of Brunson towards Hampton on the south side of the Atlantic Coast Line Railroad and Highway 28 a large acreage and on the north side of the railroad additional acres; (2) At the west town limits of Brunson, towards Fairfax about 20 acres of good high land on the north side of the Atlantic Coast Line Railroad; (3) One mile west of Brunson towards Fairfax on south side of Atlantic Coast Line Railroad a quarter-mile fronting the railway.

b. The Fairfax site is near the Allendale County line at a point where the Atlantic Coast Line and the Seaboard Railroads, paralleled by U. S. 321 and State 28 meet. This is the closest point to the Savannah River Plant, and on the newly opened pass-through route.

c. The Yemassee Sites are: (1) Two miles west of town, 40 acres on north side of Atlantic Coast Line Railroad; (2) Opposite, on the south side of railroad and State 28; (3) On southwest side near Atlantic Coast Line and U. S. 17A and U. S. 21 below Interstate 95. It is understood that the owners of some of the sites would donate ten acres or more to be used by incoming industry deemed desirable.

II. Improve Vocational Education. This should start with the local school board and extend to cooperation with State and Federal agencies offering literacy training. Consolidated usage through bussing should be introduced until Area Vocational Schools can be built locally. Transportation to the TEC Centers should be furnished, perhaps on a reimbursed basis if private cars must be used, although car-pooling efforts should be made official. Not only should full cooperation with the State Committee on Technical Education be given, but consultations should be held with the State Department of Education, and with the S. C. Employment Security Commission whose employment openings surveys and counseling services are available through offices maintained at Walterboro, Hampton, and Charleston with an itinerant office in St. George.

III. Improve Health, Water, Sewage Disposal Service in Local Communities. There is HUD assistance in planning available and some matching funds available through the offices of the State Planner. Health improvement is a first consideration for truly rural areas, and other systems in those approaching urbanization. In many cases this is the first step toward "industry seeking." If it cannot be taken the community should join in promoting another "growth center."

Section Three -- Cooperation with others, or persuading other agencies to take action of benefit to the local area

I. Improve Highway Network. The state highway department has been very helpful in improving the roads of the Three County Area, but certain roads which have been made a part of the State Highway Plan require local pressure. In Colleton County one of the locations needing attention is State Road 26 below Green Pond down to St. Helena Sound. Other county roads need improvement to other coast areas but can be delayed unless industrial sites below U. S. 17 are activated. In Dorchester County there are highway connector roads needed where the two Interstate routes 26 and 96 cross. With proper handling the two mile square area above Rosinville, or the six mile square with Reevesville-Rosinville at the diagonal corners can become one of the leading industrial centers in the state, but access roads must be constructed utilizing existing U. S. 78 and U. S. 178, and for the larger area State 16 between U. S. 178 and U. S. 78. In Hampton County one of the important road needs is for the improvement of State and County roads paralleling the

Savannah River in order to complete the interconnection between Interstate 20 near North Augusta and Interstate 95 at Hardeeville. This interconnection (State 20) from west of Allendale would also interconnect U. S. 301 and S. C. 119 for truck routes on the South Carolina side of the river, thus improving the industrial contacts of this whole section.

II. Swamp research. Much of the Three County Area is swampy, but research pilot projects concerning these areas involve more than local interests. State and Federal studies are needed to establish Southern swamp-policy and determine best-use with due regard for recreation, wildlife and conservation interests. Local officials should urge action and offer study sites and cooperation. Included in this would be a planned mineral resources survey for the coastal swamp area through a series of borings to determine the nature of the resources below the swamp, and the beforementioned chemical-mechanical pilot study on flocculation,spoil from harbor dredging, and quicksand.

III. State Data Bank. The difficulty in collecting information from these semi-rural areas, coupled with the plethora of material once collected from existing sources, strengthens the case for a state data bank. This should be set up at some central point, such as the University of South Carolina, and would contain the kind of information a site-seeker would want. Numerical data should be computerized for speed of assembly and reference. The several state agencies which must collect information such as public health records, vital statistics, automobile registrations, school registrations, etc. for each location might form a committee to coordinate this assemblage. Growth centers around each center-of-population should be established and regular general projections made of population, work force (checked with South Carolina Employment Security data) personal income, and the like for each growth center, and district, if not for each county. Legislative authorization will be required.

IV. State Growth Patterns. An area such as the Three County Area is constantly seeking to compare itself with the rest of the State and Nation. Some impediments experienced may result from lack of knowledge about the effects of population loss, selective migration, industrialization and the like. In addition each of us responds to love for home and kin, so that our own cross-roads seem best. The State Planner needs to provide local communities with information and to make studies which assess the effects of change on the State as well as the community. Some change, even the loss of population, may be the way to eventual progress. What is envisioned is the overall planning approach to recent changes in agriculture, social structure, education, cooperative action, and business life to help local communities decide on what course their future will take, by indicating what changes lead to what results. This would necessarily be a long series of studies and information gathering, but only the State can provide such guidance. Local Communities should provide what information they have, ask questions for data they lack, and compare notes with others. Working together, all levels of government, Federal, State, and Local can make the long journey from semi-rural poverty to full participation in the mainstream of American economic life possible, but only the local citizenry can make action truly effective. Local interchange, cooperation, and enthusiasm are the life blood of sustained advance, but many highly desirable actions are so far beyond the local economic capacity that they are not now even envisioned, let alone part of a started action program.

PART SIX: SUMMARY OF DETERMINING POTENTIAL FOR INDUSTRY

This technical assistance project to determine the potential for light industry in the three coastal South Carolina counties of Colleton, Dorchester, and Hampton, referred to in this study as the Three County Area, may be considered to be divided into six main projects. One of these, the conduct of three Special Investigations is presented first, out of order. The main projects aggregate about a dozen sub-projects, some of which agglomerate as many as ten topics. A generalized statement of outcome follows as appropriate in this summary. Only a few of the more than 75 specific suggestions are included here and those are without discussion.

SPECIAL INVESTIGATIONS

The Special Investigations were three. First, Subproject A. checked the feasibility of locating a Wool Scouring plant at the Walterboro Highway 303 site. The plant was ultimately located outside of the Three County Area, but in Berkeley County, one of the five counties in the original three-way research program. The same company located a Glass fiber fabric plant on another Walterboro site, to provide employment to 425 people.

Subproject B. surveyed the industry pattern of the Four Corners Area bounded by Columbia and Charleston, South Carolina, and Savannah and Augusta, Georgia, in search of service industry opportunities. For the whole area, the Orangeburg-Denmark-Bamberg triangle was found a superior service location, but Walterboro would provide a good distribution point between Charleston and Savannah.

Subproject C. investigated the potentialities of Walterboro Airport (Anderson Field, deactivated) as an Industrial Park, and identified the problems to be overcome before industry would locate there. Advice, and some assistance, was provided in solving each problem. Five or six employers (two with multiple subsidiaries) have now located in the industrial area, which now offers employment to about 735 people.

PART ONE: RESOURCE PATTERN

The major project in Part One was to establish the Resource Pattern for the Three County Area. The description and statistics on each of the three counties delineated the physical resources. The human resources were appraised by way of a population and work-force projection for each industry and occupation to 1975 and 1985 from a 1965 estimate. The effect of out-migration on the quality of the remaining labor force was judged favorable. The hand skills and special aptitudes of the poorly educated were explored, and these individuals found well-fitted for industrial employment. The opinions of residents in the Three County Area were polled and found favorable to industrial development although not all behavior was helpful. Five TEC Special Schools projects prepared residents for industrial employment.

PART TWO: COMPATIBLE INDUSTRIES

The major project in Part Two was to identify the salient features of light manufacturing industries which might prove most compatible with the resource pattern discovered in the Three County Area. The leading industries in South Carolina were identified for guidance. Standard location factors were fitted for over 180 S.I.C. codes and constituent industries named. Growth industries were reviewed in terms of production trends and national forecasts of future employment. Among the most accordant industries these were named: Wood products, Apparel, and Meat. Among industries selected as worthy of further recruitment were Farm machinery, Electrical machinery, Fabricated Rubber products, Toys and sporting goods, and Costume jewelry. The importance of establishing sites for barge traffic for luring components of the chemical industry was stated and sites identified at Stokes Bluff on the Savannah River, at Jacksonboro on the Edisto River and at St. Helena Sound on the Colleton County sea coast. The value of this last site for Oceanography and Tourism was stressed. Mention was made of the advantage provided by isolation in the swamp area. The truck-traffic closeness to the New York market (while still serving the Southeast) was indicated.

PART THREE: MANPOWER DEVELOPMENT

Part Three took as its major project the observation and evaluation of manpower development programs in the Three County Area by way of the established development agencies. All educational programs in the State were found commendable, especially literacy training joined to job training in the STEP program and the area Vocational School program, but these did not greatly help the Three County Area. The TEC Special Schools program was most helpful, and is the backbone of the manpower development program recommended. A survey of the near-term training needs in the Three County area demonstrated a need for a wide range of job training. The entire spread of education from adult literacy classes, through bussing to TEC Centers, to a Walterboro Junior College is marked for stimulation.

PART FOUR: IMPEDIMENTS TO INDUSTRIALIZATION

Part Four considers other impediments to industrial growth as seen by those most concerned in the communities. The prescribing of remedies for these impediments begins the recommendations continued in the next part. Advised are improved local attitudes, a State program of Swamp-research, and eliciting Service Industries to match the emerging industrial economy. Legislative attention is invited to the need for both more Cooperative businesses in these semi-rural areas, and to better assistance to private businessmen providing services by means of a business equivalent to Agricultural County Agents or some sort of business-service centers.

PART FIVE: RECOMMENDATIONS

The Recommendation section brings together ideas and suggestions already made. The outline here starts out with the citing of compatible industries to which solicitation should be extended: Wood, Apparel, Atomics, and Agribusiness, including Feedlot and Meat packing activities as well as the selected industries mentioned before. Our strongest recommendation is for cooperation with the Coastal Plains Regional Commission and the South Carolina Coastal District program. These multi-state and multi-county programs offer the best hope for such semi-rural counties as Colleton, Dorchester, and Hampton, although Walterboro in Colleton County should be promoted as the growth center for this whole area.

Section Two of these recommendations holds that all three counties should intensify efforts to prepare site brochures for named locations, and should improve manpower development programs through cooperative Vocational Education activities, and encouragement of adult-literacy education participation although actual employer's training should be, as it is now,through TEC

Special Schools. Local communities are told that their industrial future may depend on improving Health Services and local water and sewer systems.

Section Three, of the Recommendations Part, stresses the need for local participation and encouragement of several programs which focus the greater resources of the State and Federal government on problems which have local impact although they also benefit the rest of South Carolina. Four topics are listed. The State Highway department should be encouraged to improve roads having an industrial development significance in each county. Examples are given. State research should be instituted on land-fill and swamp area utilization, with full recognition that conservation or future park development may indicate no interference with the ecology of the swamps, especially the saliferous, even though this means fewer jobs for area residents.

STATE DATA BANK

Local authorities should furnish information for a State Data Bank at a central location, which someone must set up, possibly the University of South Carolina, as an aid to industrial development. State growth patterns should be established to supply local guidance through research on such topics as selective migration and agricultural change.

Taken as a whole, the Three County Area has a good potential for the development of a light industry base to replace its lost agricultural employment. Walterboro, although small, can be promoted as an area growth center. Neither that town, however, nor the counties of Colleton, Dorchester, or Hampton can look forward to any great growth in the immediate future. Yet, the Industrial Park at Walterboro Airport is developing successfully, and with foresighted control can become the center of an employment area extending over much of the three counties. Any one of the individual counties has industrial opportunities, which if wisely exploited could lead to a real employment boom. More probable is a gradual growth in widely diversified small industry and services with the bulk of future employment in the larger cities outside of the Three County Area and a largely stable population commuting to jobs there.

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